

Letter of Application To The
Department of Transportation For
Transfer of Obsolete MARAD and Navy Vessels

1. Background: This document describes:

- The overall process for the donation transfer of obsolete U.S. Department of Transportation Maritime Administration (MARAD) and U.S. Department of the Navy (Navy) vessels to Governments of States, Commonwealths, Territories and possessions of the U.S., municipal corporations or political subdivisions thereof (municipalities), and foreign countries for donation transfer of obsolete MARAD and Navy vessels to be used as artificial reefs;

EPA insert: Foreign countries or governments applying for transfer of MARAD or Navy vessels may face difficulties associated with additional legal requirements necessary for obtaining and exporting ex-vessels such as securing an export exemption from the TSCA §6(e)(3) ban on the export of PCBs.

- The application requirements;
- The application evaluation criteria to be used for selecting transferees; and
- The general terms and conditions to be utilized in donation transfer agreements by MARAD and Navy.

Obsolete MARAD-owned vessels are located at MARAD National Defense Reserve Fleet (NDRF) facilities at James River, Fort Eustis, VA; Beaumont, TX; and Suisun Bay, Benicia, CA. Obsolete Navy-owned vessels are located at NAVSEA Inactive Ship On-Site Maintenance Offices (NISMO) at Philadelphia, PA; Bremerton, WA; and Pearl Harbor, HI; and may also be located at other Navy facilities in the U.S. and at MARAD NDRF facilities.

2. Limitations on use:

Any obsolete vessel to be donated by MARAD and Navy under this process is limited to use as an artificial reef in accordance with the requirements of Title 33 United States Code chapter 35, except that the transferee also may use the artificial reef to enhance diving opportunities if that use does not have an adverse effect on fishery resources, as defined in section 1802(14) of the Magnuson-Stevens Fishery Conservation and Management Act of 1976, as amended (Public Law 100-627; 16 U.S.C. 1802).

3. Who is eligible to apply:

Donation transfer applications for obsolete MARAD and Navy vessels may be submitted by States, Commonwealths, and Territories and possessions of the United States of America, municipal corporations or political subdivisions thereof (municipalities), and foreign countries, except that by Navy policy, foreign organizations are ineligible to apply for and receive obsolete warships. Warships are defined as aircraft carriers, battleships, cruisers, destroyers, frigates, and submarines.

Due to the multitude of U.S. municipalities and in order to ensure an equitable process, applications from domestic municipalities must be submitted to the artificial reef coordinator of the State, Commonwealth, or U.S. possession wherein the municipality lies. MARAD will only accept one application from each State, Commonwealth, or U.S. possession for each specific

vessel or type of vessel advertised. Upon a successful donation transfer, the State, Commonwealth, or U.S. possession may submit another application for another vessel or type of vessel.

4. Overall Process:

- a. MARAD is the lead agency for the advertisement, solicitation, and evaluation of donation transfer applications for both MARAD and Navy vessels for use as artificial reefs, although both MARAD and Navy personnel will work together to accomplish this process.
- b. MARAD will advertise the availability of both MARAD and Navy vessels that may be available for donation transfer and use as artificial reefs. Applications may be submitted by two methods:
 - Applications may be submitted in response to a MARAD solicitation for a specific vessel by name, with a set deadline for the submission of the donation transfer application.
 - Applications may also be submitted in response to a MARAD solicitation for a type of vessel without identifying a specific vessel. In this case, a continuing open submission period will be maintained. As specific vessels of the types previously advertised become available, MARAD will advertise a cut off date for applications whereupon MARAD or Navy may select from available applications.
- c. All applications for vessels to be used as artificial reefs will be submitted to MARAD, except that applications from domestic municipalities must be submitted to the artificial reef coordinator of the State, Commonwealth, or Territory or U.S. possession wherein the municipality lies. MARAD will only accept one application from each State, Commonwealth, or Territory or U.S. possession for each specific vessel or type of vessel advertised. Upon a successful donation transfer, the State, Commonwealth, or Territory or U.S. possession may submit another application for another vessel or type of vessel.
- d. MARAD will request and receive interagency comments from the U.S. Fish and Wildlife Service, National Marine Fisheries Service, National Ocean Service, U.S. Army Corps of Engineers, U.S. Coast Guard, and U.S. Environmental Protection Agency, allowing a maximum 30-day review period. Interagency comments on State, Commonwealth, Territory, U.S. possession, or foreign country submitted applications must be limited to that agency's area of responsibility.
- e. A team of MARAD and Navy personnel will evaluate each application based on an advertised set of criteria, including cost-sharing proposals, and considering interagency comments. The written evaluation results will be forwarded to the decision authority within the agency owning title to the vessel to be donated for use as an artificial reef. The decision authority, at a minimum, will be the program manager of the respective ship disposal program. The decision will be based on a best value analysis.
- f. Each agency will execute its own donation transfer agreement for its respective agency-owned vessels in accordance with its own statutory authorities.
- g. The transferee will be solely responsible for site reef permits and all other regulatory permits and requirements for sinking the vessel, and for maintenance and use of the sunken vessel.

- h. The approach for accomplishing environmental preparations may vary between MARAD and Navy vessels. The point of title transfer will be addressed in each donation transfer agreement and may vary between MARAD and Navy vessels.
- i. The transferee will be solely responsible for long-term liabilities associated with the use and maintenance of the vessel as an artificial reef. The transferee agrees to hold the U.S. Government harmless for any and all use of the vessel as an artificial reef.

5. Application requirements: The following information shall be provided by the applicant:

The Kittiwake Reefing Plan (Reefing Plan) and this Application for the donation of a vessel previously submitted to MARAD in May 2005, April 2006 and November 2006 are all superceded by the enclosed. In the event of any variances between the Reefing Plan and this Application, this Application shall take precedence.

This Application and Reefing Plan and accompanying appendixes and work plans are the confidential and proprietary property of the Cayman Islands, to be used only in relationship to the Kittiwake Project.

Part I. Applicant

- a. Name of Applicant (Country)

Cayman Islands Government (CIG)
Ministry of Tourism, Investment, Commerce and Development
Government Administration Building
Grand Cayman, KY1-9000
CAYMAN ISLANDS

- b. Identify the Project Manager and/or Coordinator: Name, title, mailing address, telephone number, fax number, and e-mail address.

Mrs. Nancy Easterbrook
Cayman Islands Tourism Association (CITA)
Kittiwake Project Manager
PO Box 31086 SMB
73 Lawrence Boulevard, Islander Complex
Grand Cayman KY1 – 1205
CAYMAN ISLANDS
(345) 946-5658 Phone
(345) 946-5659 Fax
divetech@candw.ky (copy trinachristian@cita.ky)

A copy of the letter dated October 3rd, 2008 is attached as [Appendix 1](#). This letter from the CIG authorizes the above named individual to act as Project Manager for this artificial reefing Application, but notes that the legal processes for the completion and execution of the **Transfer Agreement** shall be under the direction and control of the CIG legal council.

- c. Identify other State and Federal Agencies (other than Navy and MARAD) involved in the project along with their role in the project. Include names, titles, mailing addresses, telephone numbers, fax numbers, e-mail addresses and the role of each in the project.

The following 2 lists identify our project team, comprised of knowledgeable individuals from the Cayman Islands, both Government and private sector, along with outside consultants and contractors that will assist in specific tasks. Most of the members of the project team have been active for 5+ years over the span of this project, and are familiar with all the details and revisions that have taken place. Following are the Government departments, Authorities and Ministries involved in the project:

GOVERNMENT Name Company	Position Area of Expertise	Phone (345) Fax	Email
Hon. Charles Clifford Ministry of Tourism, Environment, Investment and Commerce 4th Floor, Government Administration Building Georgetown, Grand Cayman	Senior Government Official	244-2458	charles.clifford@gov.ky
Gloria McField Ministry of Tourism & Environment 4th Floor, Government Administration Building Georgetown, Grand Cayman	Permanent Secretary Liaison-Ministry of Tourism/Environment	244-2458 945-1746	gloria.McField@gov.ky
Samuel Rose Ministry of Tourism & Environment 4th Floor, Government Administration Building Georgetown, Grand Cayman	Deputy Permanent Secretary Environment	244-2095 945-1746	samuel.rose@gov.ky
Scott Slaybaugh CI Dept. of Environment PO Box 486 GT, Grand Cayman	Assistant Director DoE DoE Oversight on ship preparations/sinking	949-8469 949-4020	scott.slaybaugh@gov.ky
Shomari Scott CI Dept. of Tourism Regatta Business Park Grand Cayman, Cayman Islands	Acting Director of Tourism	244-1266 949-4053	sscott@caymanislands.ky
Jo Gammage CI Dept. Of Tourism PO Box 67GT, Grand Cayman	Manager Public Relations Services	949-0623 949-4053	jgammage@caymanislands.ky
Colin Powery CI Customs PO Box 898 GT, Grand Cayman	Director of Customs	244-4900 945-1573	
Paul Hurlston CI Port Authority PO Box 1358GT, Grand Cayman	Director Port Authority Receiver of Wrecks Office	949-2228 949-5820	phurlston@caymanport.com
Franz Manderson CI Dept. of Immigration PO Box 67GT, Grand Cayman	Director Immigration Immigration permits for contractors	244-1293	franz.manderson@gov.ky
Don McDougall CI (UK) Dept. of Tourism 6 Arlington St. London, UK SW1A IRE	Regional Manager - Europe Liaison for UK initiatives (DoT)	44 207 491 6969 44 207 409 7773	dmcdougall@caymanislands.ky
Oscar A. "Chip" Towler, III Naval Surface Warfare Center, Dahlgren Division 17632 Dahlgren Road, Suite 158 Dahlgren, Virginia 22448-5110	License of Kittiwake Trademarks to the CI Office of Counsel (Patents)	540 653-4029 540 653-8879	oscar.towler@navy.mil
Laura S. Johnson U.S. Environmental Protection Agency West Building -- Room 7115M 1301 Constitution Avenue, N.W. Washington, D.C. 20004	Kittiwake Project Liaison, EPA Water	202 566-1273 202 566-1546	Johnson.Laura- S@epamail.epa.gov
Laura Casey Chemist US EPA OSW/HWID/ITB	Kittiwake Project Liaison, EPA PCB	703-308-8462	Casey.Laura@epamail.epa.gov
LT Bill Clark US Coast Guard Virginia, USA	Kittiwake Liaison, Kittiwake Towing approvals Environmental Standards Division		Bill.J.Clark@uscg.mil
Francis L. Daniel (Frank) DEQ Regional Director, Tidewater 5636 Southern Blvd. Virginia Beach, Virginia 23462	Kittiwake Liaison, in-water hull cleaning Commonwealth of Virginia	757-518-2171 757 518-2103	fldaniel@deq.virginia.gov

- d. Identify the names of all non-governmental organizations (NGOs) that are considered principals in the project along with their role in the project: Include names, titles, mailing addresses, telephone numbers, fax numbers, e-mail addresses, and the role of each in the project.

The following list comprises the NGO's involved in the Kittiwake project. Note that all local Cayman numbers have a (345) area code that is preceded by (1) for direct dialing. (1-345-phone number) Additional sub-contractors will be used by the primary contractor Dominion Marine Group, Virginia (DMG) as noted following in this section.

Private Sector - NGO's Name Company	Position Area of Expertise	Phone (345) Fax	Email
Trina Christian CITA PO Box 31086 SMB, Grand Cayman	CITA Executive Director Project Management Office	949-8522 946-8522	trinachristian@cita.ky
Nancy Easterbrook CITA / Divetech PO Box 31435 SMB, Grand Cayman	Owner Divetech / CITA Kittiwake Project Manager	946-5658 946-5659	divetech@candw.ky
Rod McDowall CITA / Red Sail Sports PO Box 31473 SMB, Grand Cayman	General Manager Red Sail Sports CITA W/S Chairperson & oversight	945-5965 945-8505	rmcdowall@redsail.com
Stephen Broadbelt Ocean Frontiers/ Compass Point PO Box 200EE, Grand Cayman	Owner, Ocean Frontiers CITA President & Watersports Chairman	947-7500 947-7600	steve@oceanfrontiers.com
Ron Kipp CPS PO Box 260 GT, Grand Cayman	Sales & Promotions consultant	949-2022 949-8731	ronkipp@candw.ky
Jay Easterbrook Divetech PO Box 31435 SMB, Grand Cayman	Owner Divetech General Contractor & Civil Engineer	946-5658 946-5659	divetek@candw.ky
John Mackenzie West Indian Marine Group PO Box 31194, Grand Cayman	Contractor to sink ship	945-7126 945-0613 C 916-1555	john.mackenzie@wimarine.com
Timothy Mullane Dominion Marine Group 3474 Accomack St. Chincoteague Is. VA	Contractor to Remediate and tow ship	757 544-5614 757 544-5635	tmullane@dominionmarine.net timmullane@yahoo.com
Marc J. Plisko, CIH Environmental Profiles, Inc. 813 Frederick Road Baltimore, MD 21228	Third Party Hazmat Inspector	410 744-0700	mplisko@episervices.com mijpmjp@comcast.net

- d. Identify major contractors (other than those contracted by Navy or MARAD) that will be involved in any aspect of the project (i.e., Project managers, shipyards, towing companies, naval architects, marine engineers, HAZMAT remediation and disposal companies). Identify the names, titles, mailing addresses, telephone numbers, fax numbers, e-mail addresses, and the role of each in the project.

There are 2 primary contractors for the project:

PHASES 1 & 2 – Remediation and Towing:

Remediation work and towing the Kittiwake from the James River Reserve Fleet (JRRF) in St. Eustis to the DMG Shipyard (Virginia) and subsequently towing the Kittiwake to the Cayman

Islands is contracted to DMG of Virginia, with many subcontractors for specific tasks as noted in the following chart. The list following identifies all of the contractors and sub-contractors for these 2 phases of the project. Any deviation from the appointed contractors and/or sub-contractors will be notified to MARAD in writing prior to any work being commenced.

<u>Reefing Preparation</u> Timothy Mullane, Vice President Shipyard Program Project Manager Dominion Marine Group, Ltd. 425 Campostella Road (PO Box 152, Chincoteague Isl.) Norfolk, VA 23523 Tel: 757.544.5635 Fax: 757.397.1384 Email: timmullane@yahoo.com	<i>Hazmat Remediation</i> Pete Marquez Envirocon Inc. 3419 Virginia Beach Blvd # C-13 Virginia Beach, VA 23452 Tel: 757.502.8156 Fax: 757.502-8158 Email: envirocon.inc@earthlink.net
<u>Tank Cleaning</u> Timothy Mullane, Vice President Shipyard Program Project Manager Dominion Marine Group, Ltd. 425 Campostella Road (PO Box 152, Chincoteague Isl.) Norfolk, VA 23523 Tel: 757.544.5635 Fax: 757.397.1384 Email: timmullane@yahoo.com	<u>Tank Cleaning</u> Jim Klinefelter, President Coastal Environmental Services of Virginia Inc. 5474 Nansemond Parkway Suffolk, VA 23434 Tel: 757.488.4244 Fax: 757.488.4622

<u>Transportation and Disposal</u> Richard Wilson Asbestos Waste Services (Asbestos) 412 Oak Mears Crescent, Suite 203 Virginia Beach, VA 23462-4200 Tel: 757.497.6194	<u>Transportation and Disposal</u> BFI, King & Queens County (Asbestos) Route 609 & 614 Little Plymouth, VA Tel: 804.226.6198
<u>Disposal</u> Michigan Disposal Waste Treatment Plant (lead & PCB disposal) Van Buren Township, Wayne County, MI Tel: 1 800 592-5489	<u>Transportation and Disposal</u> Anthony Mitchum, Senior Vice President C & M Industries, Inc. (water, oily waste water, waste oil, bilge sludge) transport and dispose 121 Republic Road, Chesapeake, VA 23324 Tel: 757.543.8775 Fax: 757.545.4386
<u>Transportation</u> Atlantic Waste Services Inc. (PCB transport) 412 Oakmeads Crescent #203 Virginia Beach, VA 23462-4200 Tel: 757.497.6194	<u>Transportation and Disposal</u> TW Services Inc. (PCB Cable & Wire - transporter, processor, and disposal) 1606 NE 3rd St. Madison, SD 57042 Tel: 605.256.2600
<u>Towing</u> Capt. William Douglas, GM McAllister Towing of Virginia, Inc. 2600 Washington Norfolk, VA 23607 Tel: 757.627.3651	<u>Towing</u> Captain Dick Erdt American Marine Group, LLC 425 Campostella Road PO Box 28, Norfolk VA 23501 Norfolk, VA 23523 Tel: 757.544.5635
<u>Environmental, Health & Safety</u> Ed Dullaghan, P.G., Principal Scientist URS Corporation 277 Bendix Road, Suite 500 Virginia Beach, VA 23452 Tel: 757.499.4224 Fax: 757.473.8214 Email: ed_dullaghan@urscorp.com	<u>Marine Chemist</u> John Walker Marine Inspections of Tidewater, Inc. 3081 Stratford Court Chesapeake, VA 23321-5825 Tel 757 484 8760

PHASE 3 – Sinking:

The sinking, standby tug support and final cutouts for diver preparations (in the Cayman Islands) of the Kittiwake is contracted to West Indian Marine Group (WIM) of Grand Cayman, a qualified local contractor in the marine field with suitable tugs and barges to accomplish the work effort. The Sinking Plan is included in [Appendix 2](#) of this Application.

John Mackenzie, Managing Director
West Indian Marine Group
2nd Floor, Panton House,
24 Warwick Drive, GT.,
Grand Cayman, Cayman Islands
Tel: 1-345-9457126
Fax: 1-345-9450613
Cell: 1-345-9161555

Email: john.mackenzie@wimarine.com

In both instances, contracts have already been awarded and payments from 30% to 60% of the contract value have been made to both contractors to guarantee prices and guarantee services provided.

Part II. Ship

- a. Identify the ship or type of ship (by class) requested for sinking as an artificial reef.
- b. Name of ship desired (if specific ship is desired)

Our project calls for Navy/Military ships in the 200 – 400 LOA range as per guidelines from the Cayman Islands Department of the Environment (CIDOE). Initially a list of available ships was received by us from MARAD in 2004, and a short list was created of potentially suitable ships.

Subsequent to receiving that list, 2 visits were made by our project team to the JRRF in St. Eustis, Virginia in 2004 – 2005. Subsequent visits have also been made by our remediation contractor, DMG. Following extensive on-board time with our project team and contractors, the **ex-USS Kittiwake ASR-13** was identified as the ship that we wish to secure from MARAD to be used as an artificial reef. The Kittiwake project has been actively pursued by our team in conjunction with MARAD for the past 5 years. The Kittiwake is currently on a ‘hold’ status by MARAD for the Cayman Islands, as noted in the most recent correspondence attached as [Appendix 3](#) to this Application.

As this project has sustained many delays, we have received a number of extension letters to keep the Kittiwake on a hold while we have worked to comply with all regulatory authorities, both in the Cayman Islands and in the US. As can be seen from the most current letter from MARAD, this is our final extension and we must take possession of the Kittiwake before year end 2008. As such, your final review of this Application and Reefing Plan is requested, with time being of the essence.

Ex-USS Kittiwake 251' Sub Rescue ASR-13:



N·V·R

NAVAL VESSEL REGISTER



This information resides on a DOD interest computer.
Important [conditions](#), [restrictions](#), and [disclaimers](#) apply.

KITTIWAKE (ASR 13)

SUBMARINE RESCUE SHIP

Class:	ASR 7	UIC:	04712
Status:	Disposed of by Navy title transfer to the Maritime Administration	Fleet:	
		Homeport:	
Date status changed:	03/31/2000	Berth:	James River Reserve Fleet, Fort Eustis, VA
Maintenance Category:			
Force:		MARAD Type:	
Builder:	SAVANNAH MACHINE & FOUNDRY CO		
Award Date:	05/11/1944	Delivery Date:	07/18/1946
		Age (since delivery) (At time of disposal):	53.7 years
Keel Date:	01/05/1945	Commission Date:	07/18/1946
Launch Date:	07/10/1945	Decommission Date:	09/30/1994
Age (since launch) (At time of disposal)	54.7 years	Years from Commission to Decommission:	48.2
		Stricken Date:	09/30/1994
Overall Length:	251 ft	Waterline Length:	240 ft
Extreme Beam:	44 ft	Waterline Beam:	42 ft
Maximum Navigational Draft:	19 ft	Draft Limit:	17 ft
Light Displacement:	1704 tons	Full Displacement:	2193 tons

<http://www.nvr.navy.mil/nvrships/details/ASR13.htm>

9/20/2005

Part III. Preparation of Ship(s) for Sinking. Identify any and all vessel preparation requirements to be accomplished by the applicant that are beyond the scope of work accomplished under a Navy or MARAD vessel preparation contract. Include:

We will clean/remediate the Kittiwake to an acceptable and inspected environmental state and ready for divers or diver friendly, with this work effort completed by DMG. The CIG, CITA and DMG and all subcontracts agree to adhere to the *Best Management Practices for Preparing Vessels Intended to Create Artificial Reefs (hereinafter "BMP")* dated May 2006. This document is included by reference in our Application and can be found on line at the following address: <http://www.epa.gov/owow/oceans/habitat/artificialreefs/guidance.html>

- a. The name and address of primary party responsible for project management

As stated in Part I b. above in this Application.

- b. The location and description of facilities where work will be performed

The remediation work and majority of the diver preparedness work will be completed by DMG at 425 Campostella Road, Norfolk, VA on the Eastern Branch of the Elizabeth River. The Shipyard has access to deep-water commercial channels leading to Norfolk, VA and has 18 feet of depth at its own waterfront. The facility has one half acre of yard space and more than 2 acres of deeded water space including the south and western cove upland. The shipyard is in close proximity to the current location of the Kittiwake at the JRRF.

The Kittiwake will be moored at the DMG shipyard with boarding access to approved contractors, sub-contractors and inspectors (including CIG, CIDOE, CITA, MARAD, EPA, DEQ and the US Coast Guard). The Kittiwake will be declared off-limits to all unauthorized personnel and visitors as a standard health and safety precaution to insure the protection of both the Kittiwake and workers. The facility is fenced in. **Section 6 "Health and Safety Program"** and **Section 7 "Regulatory Compliance"** included in the accompanying **Reefing Plan** provides substantial additional details on the shipyard and security including compliance with all OSHA requirements and all federal and local laws with both health and environmental over-sight.

Maps of the location of the DMG shipyard location are contained in the **Reefing Plan Section 2**, figures 1 and 2.

- c. Complete description of preparation process with particular attention to:
 - Funding

The CITA has solicited sponsorships, partnerships and donations for this project over the past 5+ years. The majority of funds have been provided by CITA, CIG (Ministry of Tourism) and the Cayman Islands Department of Tourism (CIDOT) to fund the Kittiwake project. We have sufficient funds to complete the project as shown in the following budget for the Kittiwake, including incremental costs that have been expended over the past several years.

These funds are exclusive of any marketing, collateral, retail and other materials for the promotion of the Kittiwake as a new dive/snorkel site. The marketing funds are included in our normal annual marketing budget for the CITA and CIDOT but are not available for disclosure.

Additionally, the CITA will charge a per visitor fee to the Kittiwake. These funds will be used for ongoing maintenance, mitigation, marketing and operational costs. These funds have no impact on the acquisition, remediation nor sinking of the Kittiwake. The budget for the completion of the project is shown on the following page.

Kittiwake Budget Oct 2008 (US\$)	Amount	Paid	Balance
Phase 1 - Kittiwake Remediation			
Contract Bid (DMG)	260,000		260,000
Kittiwake Reefing Plan - included in above		10,500	249,500
Paint Sampling - add on to contract	15,000	15,000	249,500
Universal Laboratory - QA/QC Report - Paid	630	630	248,870
30% deposit paid - April 2006		82,500	166,370
Interim payment on account (April 06/held by DOT cheque)		92,000	74,370
Interim payment on account (May 07/held by DOT cheque)		70,000	4,370
Phase 2 - Towing Virginia to Cayman			
Contract Bid (DMG)	121,000		121,000
30% deposit paid April 2006		36,000	85,000
Interim payment (May 2007 - held)		70,000	15,000
Total due: Dominion Marine (Phase 1 & 2)			19,370
Held on Account by CITA		35,000	-19,370
Balance Outstanding:			0
Environmental Services (Add on from contract)			
Documentation Preparation #27458	1,560	1,560	0
Revisions to Sampling plan	2,096	2,096	0
Post remediation inspections and report 2007080801-R3	20,565		20,565
120 paint samples/lab reports @ \$125 ea.	15,000		15,000
Total due: Environmental Services			35,565
Held on Account by CITA		35,565	-35,565
Balance Outstanding:			0
Phase 3 - Sinking of the Kittiwake			
Contract Bid (WIM)	49,171		49,171
30% deposit paid April 2006		14,751	34,420
Interim payment on account (April 06/held by DOT cheque)		16,500	17,920
Interim payment - Paid Aug 2007 invoiced (May 2007)		9,834	8,086
Total due: West Indian Marine			8,086
Held on Account by CITA		8,086	-8,086
Balance Outstanding:			0
Travel Expenses			
Estimated travel expenses: (CITA/DOE/CISR)	20,000		20,000
Held on Account by CITA			-20,000
Balance Outstanding:			0
Balance of Funds			
Estimate on additional fuel charges for tow (50% over contract)	60,000		60,000
Surplus in CITA accounts		19,000	41,000
MOT 5% cost over run contingency fund		26,501	14,499
CITA 5% cost over run contingency fund		26,501	-12,002
Excess Funds for contingency:	565,022	572,024	12,002

- Towing Preparation

The costs of towing preparation and towing are included in the phase 1 costs of the project for the towage of the Kittiwake from its current anchorage at the JRRF in St. Eustis, VA to the DMG shipyard in Virginia.

We will follow the guidelines provided to us in the U.S. Coast Guard Memo, dated Dec. 27, 2006, for Hull Fouling and Movement of MARAD NDRF Vessels for hull cleaning. The CITA will notify the Commonwealth of Virginia Department of Environmental Quality (DEQ) when we are departing the JRRF, when we are cleaning the hull, and when we are departing the US. Any spills noticed will be reported, while in JRRF or in the Elizabeth River (where remediation will take place). If noted and identifiable, the CITA will notify the US Environmental Protection Agency (EPA) of any spills in the JRRF while the ship is located there while the Kittiwake is being dislodged from its anchorage or towed out of the JRRF. The Kittiwake has been inspected for suitable hull integrity and conditions to allow the Kittiwake to be towed in a safe manner and without environmental impacts; however an oil spill response plan is also included. This is also a requirement of the towing company, to inspect for the watertight integrity of the hull prior to a tow. Also, the MSO will be notified and a dead ship tow proposal will be provided for approval prior to movement of the Kittiwake.

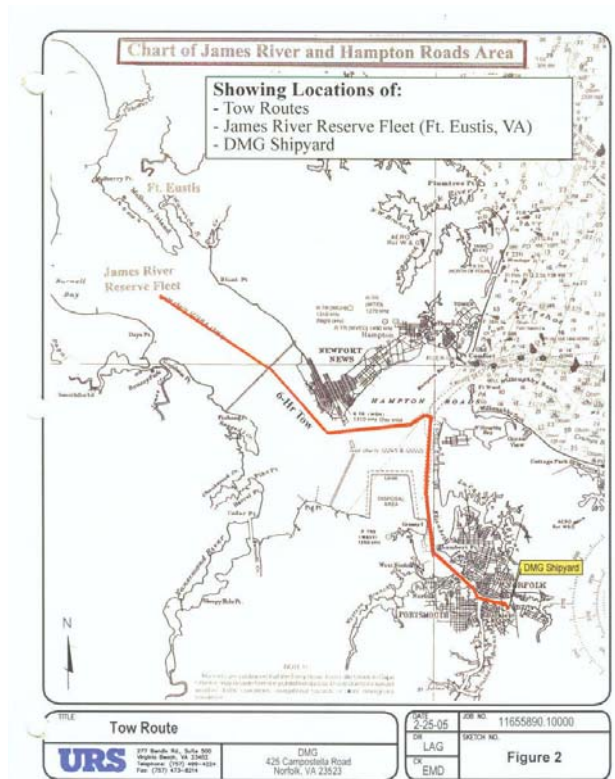
The initial Trip In Tow Survey, including visual hull inspection, was completed in February 2008 for the inland tow from the JRRF to the DMG shipyard. The survey showed the Kittiwake was suitable for tow with no ballast change needed. A copy of the survey is included in the *Reefing Plan, Appendix D*.

The costs of towing preparation and towing are included in phase 2 costs of the project for the towage of the Kittiwake from the DMG shipyard to Grand Cayman, Cayman Islands.

- Towing evolution to work locations and to reefing site

DMG will be the primary contractor responsible for towing the Kittiwake, using licensed and insured sub contracts for the actual towing. This towing contact is in 2 parts:

1 Inland tow: Towing evolution from JRRF to DMG Shipyard. Due to the proximity of the DMG shipyard to the Reserve Fleet, the tow will be entirely inland navigable waters and approximately a 6-hour tow. A copy of the inland tow route is shown on the right. >>



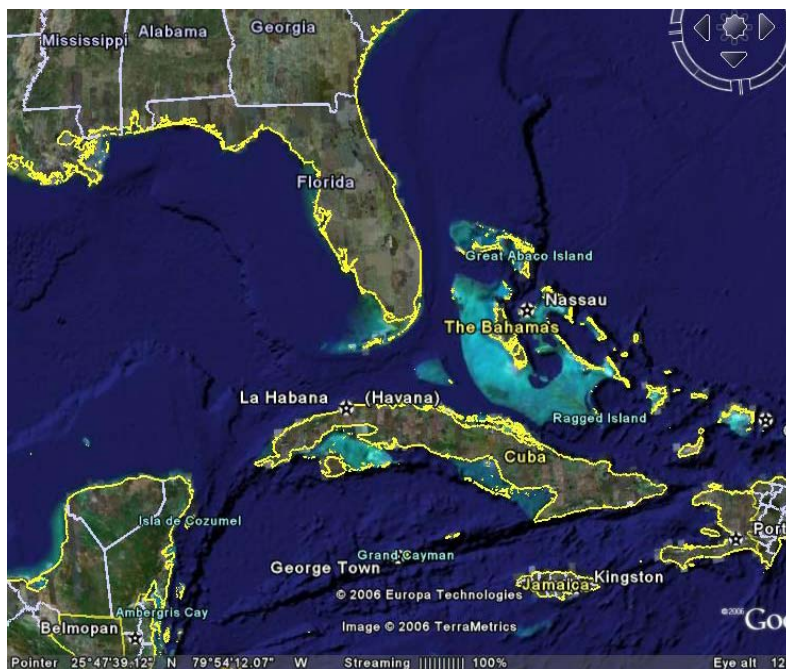
Per MARAD requirement for US Coast Guard dead ship tow approval, this will be provided to MARAD in advance of the removal of the Kittiwake from the JRRF. The current lead time for submission and awaiting comments or restrictions on a dead ship tow from the US Coast Guard office in Virginia is 48 hours in advance. We will submit the towing plan and survey prior to the tow from the JRRF to the DMG yard and await approval from the US Coast Guard. As discussed with MARAD and EPA, both the local/inland and the subsequent international dead ship tow surveys and plans will be submitted to the US Coast Guard and copies of all submittals will be sent to MARAD and EPA in advance of the Kittiwake being moved. This will include the Load Line exemptions and towing insurance certificates. Further details on the basic towing requirements are contained following.

2 International tow - Towing evolution from the DMG Shipyard to Grand Cayman, Cayman Islands: This will be completed following final inspections and approvals of the remediation and diver preparedness work from MARAD, EPA and CIDOE. Following these satisfactory inspections, the Cayman Coastal Works License and Ocean Disposal Permit will be able to be issued. All permits required to exit US waters from the US Coast Guard will be provided to MARAD, EPA and the CIG/CIDOE prior to exiting US waters.

There are no permits required for the Kittiwake to enter Cayman waters, as noted from the attached letter from the Cayman Islands Shipping Registry (Maritime Authority), as the Kittiwake will enter Cayman as a “Dead ship” under tow, attached as [Appendix 9](#).

During the tow from the US to the Cayman Islands, bilge waters will be flushed as needed to insure that no foreign waters are being imported to the Cayman Islands. The procedure for preventing the introduction of exotic organisms into Cayman waters is contained in the ‘International Maritime Organization’s Guidelines for the control and management of ships ballast water’ to minimize the transfer of harmful aquatic organisms and pathogens. Cayman will be adhering to the conditions listed in this document. The hull cleaning is included in phase 1 of this project and detailed in this Application and the **Reefing Plan**. This is a serious issue to the CIDOE and will be dealt with under strict enforcement and in compliance with the International Maritime Organization’s Guidelines for the control and management of ships ballast water.

The tow route will be along the eastern seaboard of the US from Norfolk, Virginia to southern Florida in the Key West region, where the Kittiwake will exit US waters into international waters. From Key West, the Kittiwake will be towed along normal shipping



lanes around the western side of Cuba (Cape San Antonio area) to the west side of Grand Cayman (Port of Georgetown) over an approximate distance of 325 nautical miles.

Once the Kittiwake arrives in Cayman she will be placed on a mooring suitable to the tonnage of the Kittiwake on the west side/lee side of Grand Cayman for a period of approximately one week. WIM has this mooring installed already. WIM will take over the Kittiwake from the international towing company and is contracted to provide a standby tug 24/7 until the Kittiwake is sunk. WIM will also tow the Kittiwake from the Port of Georgetown to the sinking site (also located on the west side of Grand Cayman). The tug will be on 24/7 standby in the event of any inclement weather that may cause a need to move the Kittiwake. Final diver cutouts and final sinking preparations will be completed during this week.

All pumps, lights and equipment that need to be on the Kittiwake for the international tow will be removed from the Kittiwake upon arrival in Cayman. Temporary equipment needed for the final preparations will be supplied locally by WIM. All of this equipment will be removed prior to sinking. As noted in the Sinking Plan, Appendix 2, the pumping of seawater into the vessel (mechanical flooding) will be from 8 pumps (with backups) located on the barge alongside the Kittiwake, not on the Kittiwake itself.

Section 5 of the **Reefing Plan** includes additional details for towing the Kittiwake, including preparation, mooring, security, entrance and visitors, on board hazards and the like. A DMG Supervisor will be on-board at all times while the Kittiwake is under tow. Included in the plan are:

- Suitable tug with sufficient range and reserves for a tow between JRRF and the DMG Shipyard, and then the DMG Shipyard and Grand Cayman, Cayman Islands.
- Winches, towing bridle, adequate spares, shackles and other ancillary equipment including charts, crew, towing lights, pumps and day signals
- Soundings of all tanks to be verified and displacement / light weight determined
- All doors and bulkheads to be sealed as needed and made watertight
- Wooden plugs as appropriate on decks to be trimmed and fitted.
- Mooring bitts and deck plating in way to be strengthened for tow bridle connection
- Anchor chain to be prepared for use
- Suitable primary towing bridle arrangement to be provided
- Suitable secondary towing arrangement to be rigged
- All loose chain and equipment on the main deck to be collected and secured
- Wheelhouse windows to be secured watertight
- Towing day and night (solar) signals installed as per regulations
- White lines (or contrasting color) in way of bow and stern
- Pilot ladders rigged port and starboard
- Emergency anchor system rigged
- Propellers to be secured
- Rudder to be secured
- All watertight doors secured
- Draft of 17 feet for the Kittiwake has been noted both for towing and entering Grand Cayman, Georgetown Harbour.

- Maximum ballast, all tanks pressed up and any free-standing water eliminated
- Slipping the Kittiwake from mooring arrangement & provide a pilot/escort to tow to the harbor entrance
- Oil removal

All oils, lubricating oils and greases (used for winches and cargo handling machinery or other machinery), hydraulic fluids, heat transfer fluids, waste oils, diesel and fuels will be removed in Virginia, as per the specifications in BMP and under the compliance conditions as stated in the **Reefing Plan**. Any equipment or parts that may contain oils (or the like) that cannot be drained and flushed, such as oil filters and strainer elements, will be removed.

The pillar block bearings on the shaft will be drained and then cleaned out using live steam. The shaft will be locked, to prevent any rotation, which is a standard item to be done for any dead ship tow. The shaft is sealed at the stuffing box from a packing gland that has tallow impregnated flax packing in it, and that will stay as is, or will be repacked with more tallow impregnated flax packing if it starts leaking. The flax packing is a non-hydrocarbon, old style, non toxic, and biodegradable packing material, used in virtually all older shaft stuffing boxes. The shaft will be locked by installing a locking plate if needed or one may already be installed or on board, as is there is often a locking plate already in the shaft alley and available for use.

The bilge areas will be emptied of seawater and fresh water and be free of visible oils, grease or sludge, all debris will be removed, including debris contaminated with fuel, oil or grease. The bilge areas will also be cleaned with live steam.

The main ships diesel engines (4 of them) will remain on the Kittiwake for diver interest. The engines and associated manifolds will be gutted (removal of all internal parts). The engines and entire fuel/oil system will be drained, cleaned of any petroleum products, flushed and steam cleaned.

All electric motors and liquid-filled electrical equipment suspected of containing PCBs or PCB contaminated dielectric fluids will be removed from the Kittiwake.

This work will be completed under the Supervision of DMG and subcontracted out as required. A certified Marine Chemist will inspect and verify this work. This also includes all tanks designated for holding ballast water. The US Coast Guard will also inspect this work, per our understanding, along with the other inspectors on the Kittiwake project.

- Tank cleaning

The following outlines the procedures that will be followed regarding the cleaning of the tanks on the Kittiwake. The complete tank cleaning and gas free operational procedures are contained in the **Reefing Plan** in **Appendix E Health and Safety Plan (HASP)**. The following is to further clarify and add to the procedures to be taken for the reef preparation of the Kittiwake. The tank cleaning procedures are as follows and will take place in Virginia at the shipyard of DMG:

- Pump any free standing liquids, using the appropriate hoses and equipment for the handling of oil. Free standing liquids are to be pumped shore side into the slop frac tank for further recycling and reclamation.
- Sludge in the tank bottoms will be hand mucked as necessary, and placed in a sealable ring top drum, to be removed from the ship and recycled.
- Using a high pressure hose and nozzle, the tank will be washed from the top down. A suction hose is to be used during washing procedures to prevent any accumulation in the tank bottom, with the wash water being pumped to the shore side frac tank for recycling and reclamation.
- Cleaning procedures are to be repeated until the tank is clean of any hydrocarbons and residues.
- After each tank has been cleaned, the tank bottom is to be ragged out as necessary, to be left in a clean and dry condition.
- Tank is to be mechanically ventilated to remove any smell of hydrocarbons.

The Navy Hazardous Materials (HAZMAT) inventory records from 1994 – 1997 showed that all fuel tanks were empty. However, every fuel tank will be opened and visually inspected to insure that it is empty, and to replace gaskets with known non-PCB gaskets. If any fuel remains, it will be removed.

KITTIWAKE ASB-13 FINAL TANK SOUNDINGS
7-23-97

<u>TANK #</u>	<u>FEET</u>	<u>LOCATION</u>
A-902-F	EMPTY	3-57-2
A-903-F	EMPTY	3-57-1
B-901-F	EMPTY	3-58-1
B-902-F	EMPTY	3-58-2
B-903-F	EMPTY	3-71-1
B-904-F	EMPTY	3-71-2
B-905-F	EMPTY	3-72-1
B-906-F	EMPTY	3-72-2
B-907-F	EMPTY	3-85-1
B-908-F	EMPTY	3-85-2
C-901-F	EMPTY	2-90-1
C-405-F	EMPTY	2-95-1
C-406-F	EMPTY	2-95-2
C-407-F	EMPTY	2-99-1
C-408-F	EMPTY	2-95-2
C-409-F	EMPTY	2-101-1
C-410-F	EMPTY	1-101-2
C-411-F	EMPTY	2-105-0
C-412-F	EMPTY	1-105-2
C-902-F	EMPTY	1-105-2
C-403-L	EMPTY	2-91-1
C-404-L	EMPTY	2-91-2
2190 L/O	EMPTY	2-47-3
2190 L/O	EMPTY	2-48-3
SETTLING B1-9250	EMPTY	2-71-1
A-406-W	EMPTY	FR 36-46 PORT & STAR
A-407-W	EMPTY	FR 36-46 PORT & STAR

All tanks, bilges, pipes and the like will be emptied and cleaned including the removal of any cleaning fluids. Further to this, some tanks will be filled with potable water for towing/ballast as shown on the General Arrangements. Large paper copies of the General Arrangements have been provided September 2007 to DMG, WIM, MARAD, EPA and CIDOE, with smaller electronic copies provided in [Appendix 17](#) for general reference.

- Disposal procedure of oil and other hazardous substances

All oils, greases, lubes, PCBs, lead, asbestos, biocides (such as TBT), radioactive materials, hydrocarbons and all hazardous substances (as identified in the BMP and as referred to as HAZMAT in this Application) will be removed from the Kittiwake prior to departure from the US. DMG and their licensed subcontractors are noted in Part I section (d) of this Application and will be responsible for this work. All OSHA regulations will be complied with for worker health and safety standards. Only authorized facilities and transport companies will be utilized. Further details on this topic are contained in the **Reefing Plan** for the Kittiwake.

- Intended stripping such as machinery, structure, electrical components, and hazardous materials in preparation of the vessel for sinking

All diver safety and/or environmentally dangerous substances (HAZMAT) will be removed prior to departure from the US. A small amount of steel for the final diver cutouts will be removed in the Cayman Islands in order to keep the watertight integrity of the Kittiwake for towing purposes. This will be disposed of in the Cayman landfill or recycled is possible.

The Diver Reefing Requirements, [Appendix 7a](#) defines specifically, room by room, any equipment that will be left on board and what equipment will be removed. In general, all electric motors will be removed and all HAZMAT will be removed, plus all notable or potential flotsam materials such as light paneling, wood, lagging, carpets, loose furniture and the like.

For both diver safety and the future maintenance of the Kittiwake and reefs of Cayman once the Kittiwake is sunk, if a given structure is solid, intact and permanently affixed to the Kittiwake then it will be left on board. As much equipment (examples would be the steel iron board, ship wheel, several bunks), main engines, masts and such as possible will remain onboard the Kittiwake as these help to create homes for marine life in colonization. However, equipment left on the Kittiwake for sinking will be remediated, gutted, cleaned to environmental standards and if this is not possible for a piece of equipment, it will be removed. Engines will be stripped internally and cleaned but left on board for diver interest. Machinery represents interest to divers and snorklers when visiting the ship. We will have an artificial reef that will be interesting, promote marine growth, entice fish and allow multiple different dives on it.

All electrical cable will be removed.

Any equipment that is considered a diver safety hazard will be removed. Additionally, we will cut off the top of the forward mast and the stern booms/a-frame tower to make the Kittiwake an

overall height of 48 feet from the bottom of the hull to the top of the ship. This will insure that clearance to the surface of the water (once sunk) is a minimum of 14-15 feet.

- Intended disposition of stripped materials

All stripped materials will be disposed of in a legal manner. Any materials stripped from the Kittiwake that are potential HAZMAT will be treated as if they are HAZMAT. These materials will be taken in authorized containers to authorized storage sites for the specified type of material. A list of contractors and transportation companies that will handle HAZMAT are contained in Part I section (d) of this Application.

DMG will not store any HAZMAT on their premises with the single exception of shipping containers that are regulatory approved and that are necessary to contain such material or waste while the specific HAZMAT subcontractor is on route to pick up the materials.

All solid and hazardous wastes generated from the remediation of the Kittiwake will be disposed of at approved and licensed solid or liquid HAZMAT waste control/storage facilities in the US.

Copies of all manifests for the disposal of all HAZMAT will be provided by DMG and their subcontracts to the CITA, CIDO, EPA and MARAD as final records and documented proof of compliance.

All local and federal laws will be complied with.

- Nature, locations and quantity of any hazardous materials that will remain onboard including tank cleaning compounds

No HAZMAT will remain onboard, including any tank cleaning compounds, once the Kittiwake is ready to leave US waters (with the exception of paint that is <50ppm of PCBs). This will be verified by an inspection process of MARAD, EPA and CIDO with the abatement records as noted previously provided as documented proof. Additionally Environmental Profiles Inc. (EPI) will perform ship-wide inspections and copies of their final reports to all parties.

- Inspection of preparation process

The CIDO, MARAD, EPA and the US Coast Guard will conduct inspections of all phases of the remediation and reefing preparedness process. MARAD and the EPA may conduct their own inspections as required and requested. Access to the DMG Shipyard will be afforded and provided to all inspectors as needed. All parties agree that all inspections will be carried out in a timely manner and full reports from all inspections will be provided to all other parties.

Additionally, EPI will perform a final inspection, as an independent third party that will report directly to all parties, including CITA. The plan for the EPI inspections is included in [Appendix 6](#).

- Hazardous material abatement process

All HAZMAT will be removed during the Kittiwake remediation process in the US to prepare the Kittiwake for use as an artificial reef. This includes the removal of all exposed asbestos, PCBs, oils and fuels, mercury, ozone depleting substances, greases and lubes and other HAZMAT as identified in the BMP.

Process controls for the remediation, handling, transport, human safety, etc. are included in the ***Reefing Plan – Appendix E*** sections 1 through 24. These controls detail the operational, legal and compliance conformance for the removal and handling of all HAZMAT.

With regard to the Kittiwake's polychlorinated biphenyls (PCB) remediation the Cayman Islands will not be applying for an exemption under the Toxic Substances Control Act (TSCA) section 6(e), as no materials that contain PCBs ≥ 50 ppm will remain on board the Kittiwake prior to export. All potential material containing PCBs will be removed, with the one exception of any paint that contains < 50 ppm, which will be allowed to remain onboard the Kittiwake. This has been agreed upon in the Cayman Islands, and the letter from the CIDOE agreeing to paint import that may contain < 50 ppm of PCBs is attached as [Appendix 4](#).

Our remediation plan calls for the removal of all liquids and solids that are 'suspect' of containing PCBs, using the BMP guidelines for identification of suspect materials. This applies to all solid and liquid materials and includes the removal of all cable insulation, rubber and felt gaskets, thermal insulation material including fiberglass, felt, foam and cork, voltage regulators, switches, reclosers, bushings and electromagnets, electronic equipment, switchboards and consoles, adhesives and tapes, caulking, rubber isolation mounts, foundation mounts, pipe hangers, plastics, oil used in electrical equipment and motors, anchor windlasses, hydraulic systems, transformers, capacitors and electronic equipment with capacitors and transformers inside, surface areas contaminated and fluorescent light ballasts. We will, per EPA's PCB regulations at 40 CFR 761.97:

- remove and dispose of all manufactured products containing ≥ 50 ppm of PCBs;
- remove and dispose of all liquids containing ≥ 50 ppm; and
- remove and dispose of all materials contaminated by spills where the concentration of the original PCB source is ≥ 50 ppm.

Additionally, we will:

- remove and dispose of all manufactured products suspected of containing any PCBs, regardless of potential ppm concentration and treat these products as if they were PCB contaminated;
- remove all liquid containing < 50 ppm PCBs, meaning all liquids (except for potable water that will be added post-remediation for ballast) (per the BMP Guidance recommendation);
- remove and dispose of all paint that contains ≥ 50 ppm of PCB found in our past and future paint samples;
- have a third party inspection on all work after remediation, including resampling of the paint on a ship-wide basis by EPI.

We will remove all liquids such as oils, fuels, lubes, greases etc with the end goal of no/very minimal sheen being visible upon the surface after sinking. Regardless of the historical data of the soundings of tanks, all tanks will be opened, inspected, emptied (as required) and cleaned. All small machinery with electric motors will be removed. The large Cat engines that powered the ship will be stripped internally, cleaned and have the heads re-installed but with no guts inside. Mechanical cleaning will be used to the extent possible, with advanced cleaning methods used if and where needed.

This Application and **Reefing Plan** have been previously amended three times (May 2005 and April and November 2006) with this current October 2008 submission being the fourth submission. This Application includes additional materials and reports that are now available due to continued research on the Kittiwake by the project team over the past 2 years since our last submittal.

In addition to our more recent lab and field research, we have used various historical documentation to ascertain the general state of the ship with regards to HAZMAT, including HAZMAT inventory records supplied by the Navy dated from 1994 through 1997. This data was used to create a baseline to estimate the total work effort and costs to remediate the Kittiwake by knowing the general condition of the Kittiwake when she was laid up in the JRRF. Additionally, we contracted with Mr. James Dolph CIV NDW, Naval Historian, Portsmouth Naval Shipyard, Portsmouth, New Hampshire who provided us with maintenance records of the Kittiwake during its time in service. We also reviewed the Universal Laboratory paint analysis reports (August & October 2005) on the sister ship to the Kittiwake, the *Sunbird*, (for scrapping) and all sample results showed no concentrations of PBCs \geq 50ppm.

The dated, historical data is not being relied on for our remediation plan, but gave us a preliminary view of general expectations as to the state of HAZMAT inventory on the Kittiwake, allowing us to receive bids on remediation work in the early stages of this project.

As stated in the **Reefing Plan**, copies of all hazardous waste manifests will be provided to the CITA by DMG. All remediation/abatement records (once completed) will be sent by CITA to CIDOE, EPA and MARAD. Additionally, the final reports from our third party independent inspector, EPI will be provided to all parties. Additionally, as per the request of the EPA, MARAD and the EPA will be provided with a copy of all inspections from the CIG/CIDOE and request a copy of any MARAD/EPA reports in exchange. Copies of reports from the CIG/CIDOE will be sent to the following, or to other such instructions as may be received from time to time in writing

EPA:

Laura S. Johnson
U.S. EPA, Office of Water
EPA West -- Room 7115M
1301 Constitution Avenue, N.W.
Washington, D.C. 20004
Johnson.Laura-S@epamail.epa.gov

MARAD:

Zoe Goss
Artificial Reefing Coordinator
US DOT, Maritime Administration
Office of the Ship Disposal Programs
1200 New Jersey Avenue, S.E. W23-498/212
Washington, DC 20590-00001
202-366-0270
zoe.goss@dot.gov

Copies of all reports from MARAD, EPA, DMG or any regulatory authorities should be sent to the Kittiwake Project Manager and will be subsequently forwarded to all Cayman regulatory authorities:

CITA:

Nancy Easterbrook
Cayman Islands Tourism Association (CITA)
Kittiwake Project Manager
PO Box 31086 SMB
73 Lawrence Boulevard, Islander Complex
Grand Cayman KY1 – 1205
CAYMAN ISLANDS
divetech@candw.ky and cc. on all correspondence trinachristian@cita.ky

Per request by MARAD, the Cayman project team has accomplished a very time consuming and expensive task; that of completing paint sampling for potential PCB contamination on the Kittiwake. Our remediation plan calls for the removal of all liquid and solid PCBs, except for paint, whereby any paint <50ppm of PCBs is allowed. The results of the various paint samplings that have been completed have provided us with confidence on the state of PCBs in the paint and the remediation efforts required clean the Kittiwake.

The first batch of 121 paint samples was completed in April 2006. Particular attention was paid to areas of the ship that would be more probable of containing PCBs such as rooms subject to high heat or fires (boiler room, engine room, electrical/radio rooms, weapons storage area, areas with hydraulic equipment) The paint sample protocol/plan for these samples is included as [Appendix 5a](#), which was accepted by MARAD in April 2006. This sampling resulted in one contaminated sample (#67) which showed a PCB concentration of 108ppm of Arcolor 1262 and was the one exception of a paint sample that contained ≥ 50 ppm of PCBs. Sample #67 was taken on the overhead, main propulsion, lower starboard side B-204-E Frame 79. The sample was white paint. Of the 121 samples taken, there were a total of 35 samples that were white paint, with none of the other white paint samples showing any Arcolor 1262. Other white paint samples were taken from the fan room, interior bulkheads, shaft alley, diving bulkhead, recompression chamber and overhead, bulkhead in welding, forward bulkhead including distribution compressor, lower main engine room, air compressor room, lower storeroom, electronics storeroom, bosuns lockers, overhead above the generator sets, overhead main propulsion, sonar room and main propulsion room. All white paint, including sample #67 is common, standard Navy white paint (150 or 151).

There were 10 paint samples from the main propulsion area, 1 foot from the hot sample area, 5 feet from the hot sample area, 8 feet from the hot sample area, 15 feet from the hot sample area, and continuing from there. All paint was of like color paint, and all other samples came up negative, with the highest concentration of PCB being 19 ppm. This made the one sample #67 an exception.

Photo documentation of all samples was also taken and has been provided to MARAD and EPA on a CD in our Application in November 2006. [Appendix 5b](#) shows the Kittiwake General Arrangements with the location of where all paint samples were taken during this sampling session. [Appendix 5c](#) shows the relationship of all samples to sample #67. [Appendix 5d](#) shows the lab results from these samples dated May 2006. [Appendix 5e](#) includes the QA/QC procedures from these samples.

In April 2007, a second set of paint samples were taken in the same vicinity of the ship as sample #67 due to the concentration of Arcolor 1262 found in Batch 1 (April 2006). The results of both of these samples (001 and 002) show a higher concentration level of Arcolor 1262 of 3,400ppm. This data would indicate that the original sample #67 was at the outskirts or edge of the contaminated area, and that the second batch of re-sampling found the core of the contaminated area. The remediation plan for this area is detailed in [Appendix 5f](#) which will remove all metal from the effected area (not just the paint) and treat the metal as PCB contaminated material. The lab results and QA/QC report of these 2 paint samples are included as [Appendix 5g](#). Photo documentation of the 2 additional samples is included as [Appendix 5h](#).

Per comments from the EPA in May 2007, we realize that all QA/QC procedures were not accomplished on the original batch of samples. However, we submitted our paint sampling plan, waited 6 months and went ahead with the plan. We were able to obtain after-the-fact QA/QC reports from the lab, to the extent that they were available based on sample size, duplicates, etc. Based on the following summary of tasks completed or to be completed, we believe that the data is still substantive and correct in its analysis of the paint onboard the Kittiwake with regard to PCBs.

- Review of Navy environmental survey (1994–1997) on HAZMAT ([Appendix C](#) of the [Reefing Plan](#))
- Review of the maintenance records provided by James Dolph, Naval Historian
- Paint sampling of the Kittiwake (121 samples)
- Paint re-sampling of the Kittiwake (2 samples) in contaminated area
- Paint re-sampling of the anti fouling paint (2 samples) for TBTs (biocides)
- Future: Paint re-sampling by an independent third party inspector (EPI)

The type and color of paint (white) that was sampled is the typical paint used throughout the ship, and there were not any other concentrations of Arcolor 1262 PCB in the white or any other color paint. This would indicate that sample #67 is an isolated hot spot and we speculate that this contamination was most likely caused by some form of leaching of something that has since been removed, rather than being inherent in the original paint itself. We speculate, as an educated guess, that there was something on the deck above, that would have dripped down and pooled on

the beam from above as it is not a sealed deck above. The other probability would be the piping right next to the contaminated area. There is a union (a fitting that connects two pieces of pipe together) right next to the hot area, that could have been spraying or leaking onto the beam. Also, there is an older generator (3-268A Cleveland) (these were notoriously leaky) that is in parts on the deck above, which could have been a potential contamination source for the beam below. We sampled the paint directly adjacent to the generator and found no contamination that exists at this time. We offer this dialogue as potential causes for the contamination area.

While we attempted to meet the request of no post remediation sampling, the EPA has requested (May 2007) an independent third party inspection post-remediation, which we are complying with. Our post remediation inspection includes a third party independent inspection, sampling, analysis and report on all HAZMAT, including the paint. The CIDOE has agreed to this plan also. The plan is from EPI and is included as [Appendix 6a](#), along with the detailed methodology of how the post-remediation paint samples will be collected as [Appendix 6b](#). Resumes from the 2 key executives for this plan are also included as [Appendix 6c](#). This plan includes not only the sampling and reports on the paint, but a complete ship wide inspection and report on all PCBs and other HAZMAT. This plan has been reviewed by EPA with the following comments:

Feb 11/2008 "As agreed on January 16th, EPA provided final comments on EPI's Dec. 21st proposal for the Kittiwake. EPI finalized their plans (submitted Jan. 18th) based on our discussion and EPA's comments. As discussed, EPA has no further objections or concerns regarding EPI's proposal for the Kittiwake." Laura Casey Chemist US EPA OSW.HWID/ITB 703-308-8462

We have evaluated the quantity of metal and resultant cut-out that needs to be removed around the sample #67 area, and have no concerns regarding the seaworthiness of the Kittiwake following the removal of this PCB contaminated area.

There are three (3) additional requirements for the remediation work/environment-cleaning requirements other than preparing the Kittiwake to meet the BMP and the CIDOE requirements. These include:

1. Diver Safety/Reefing Requirements

As the Kittiwake will be used as an artificial reef, a list that contains non-hazardous materials (or HAZMAT that have been remediated, gutted, cleaned and turned into non-hazmat), cutouts and instructions for items that need to be removed for the underwater environment is included in the Diver Reefing Plan in [Appendix 7a](#). This list goes room by room through the Kittiwake to identify specific needs in each room. All materials on board the Kittiwake as identified in the BMP Guidelines that could potentially contain any HAZMAT will be treated as such, removed and disposed of as HAZMAT or gutted and cleaned to become non HAZMAT. All items that will remain on the board the ship at sinking time will have been remediated.

There are a number of items that the CITA wishes to have for 'souvenir/museum' items, in general smaller items that have souvenir/historical value or that would be items that divers could easily potentially remove from the ship once underwater. Any items that may contain HAZMAT

such as the Gyro, Compass and the like would be fully remediated prior to being given to the CITA as a souvenir item. The list of items that the CITA wishes to have as souvenir items (for export) are included as [Appendix 7b](#), with the clear understanding that these items will have to be clean, gutted as needed and prepared for export should they contain any HAZMAT. We will place these items in boxes once remediated (if needed), which will remain on board the Kittiwake for export, but once in Cayman they will be removed to be placed in the Scuba Diving Hall of Fame Museum, auctioned to raise funds, given to important supporters of the project or otherwise treated as items of historical value, prior to sinking the Kittiwake.

2. Hull cleaning/potable ballast water

This requirement is needed in order to remove any potential of the importation of any foreign marine or invasive species to Cayman waters.

All tanks on the Kittiwake (fuel, ballast, water, black-water, etc.) must be cleaned and not allowed to be further contaminated during transport. Stability under tow must be accomplished. Only potable water will be used for ballast, including the filling of the double bottom fuel tanks, the air storage banks and the like. The ballast to be filled with potable water is identified on the General Arrangements that have been sent in paper form to MARAD and the EPA, noted in pink. The Sinking Plan further explores this area in [Appendix 2](#). The noted cutouts and air vents on the General Arrangements are subject to review and minor adjustment, once the ship has been remediated and all materials removed, including internal diver cutouts. It is substantially correct however in its current format. The General Arrangements will be updated, post remediation, to reflect any changes made to the plans presented.

Hull cleaning will be done as close as practical to the Kittiwake departure from the US, but no sooner than 3 weeks.

We have worked in consultation with Mr. Francis Daniel of the Commonwealth of Virginia DEQ and with Mr. Bob Grabb of the Virginia Marine Resource Control office (VMRC). Mr. Daniel advised that while their role is to protect water quality, that the total amount of suspended solids in the water column, while artificially raised for a temporary period of time from hull cleaning, is an acceptable degradation that the Commonwealth of Virginia is willing to accept to get the ships out of the area, with more serious environmental damage potential arising from lots of oil and hazmat in the ships and hull degradation or hurricanes posing potential devastating results. We are also aware that the Eastern branch of the Elizabethian River is already polluted and the Southern branch is listed as one of the most polluted rivers in the area. Further, DEQ advised that any TBT (biocide) activity is minimal related to the amount of TBT (biocide) contamination from waterways with normal shipping activities; that our hull cleaning would not change the levels by any amount, should there be any present. While DEQ would prefer the cleaning to take place at the JRRF due to its flushing capabilities, they understand that once we take the Kittiwake away and remediate it, that we cannot then return it JRRF for hull cleaning. Mr. Grabb stated that the VMRC had no objections (nor any permit capabilities) due to the age of the ship and the fact that any marine species on the hull was now endemic to the region.

Two additional hull paint/anti-fouling paint samples for TBT/active biocide/toxic metal were taken, which generated negative results (both amidship, one starboard and one port). Also, in the original batch of 121 samples taken in 2006, 3 of these were hull paint samples (#118 - #121) and returned negative results for PBCs.

According to the maintenance records of the Kittiwake, which were provided to us by James Dolph, Naval historian, the last hull sand blasting was completed in 1986, and in 1990 the Kittiwake was dry docked for hull preservation (along with other maintenance that was needed). This data, in addition to our 2 sets of anti fouling paint samples (negative) would suggest that no active biocides or PCBs are present on the Kittiwake hull paint. The Kittiwake has been in the JRRF, without any hull painting, for about 18 years, which is much longer than the general life span of biocides. The anti fouling paint that is on the Kittiwake is a self polishing type that is very deteriorated and worn from use. While some anti fouling paint is rated for 2 years, and some for as much as 5 years, the water quality department from EPA has made the point that they have found active anti fouling paint 12 years old, but this was isolated in our understanding and the Kittiwake hull paint is older than 12 years.

Notwithstanding the data regarding the hull paint and probable lack of toxins, the hull will be cleaned for the purposes of preventing any invasive marine species from entering Cayman waters.

The letter granting permission to clean the hull in-water in Virginia from the DEQ and the Virginia DEQ policy letter to MARAD (April 2007) are attached as [Appendix 8a](#). The photos and lab reports of the additional anti-fouling paint samples are attached as [Appendix 8b](#).

3. Removal of all materials that could potentially contain PBCs (except for paint <50ppm)

The **Reefing Plan** calls for the removal of all liquid and solid materials that may potentially contain PBCs (as identified in the BMP) and the removal of all paint that contains ≥ 50 ppm of PCBs. This is a more stringent requirement than stipulated in the BMP in order to eliminate solid or liquid PCBs from Caymans waters and eliminate the need for sampling and testing for PCBs (except for paint as noted herein) and replacing it with inspections from all authorities including the CIDO, EPA, MARAD and EPI in order to confirm that no materials in reference remain onboard the Kittiwake following the remediation work and prior to export of the Kittiwake from the US. The CIG will not be applying for an exemption under the Toxic Substance Control Act (TSCA section 6(e)).

All towage in US Coastal waters, cleaning, disposal and additional diver readiness work efforts will be completed in the US, with the exception of final cutouts (for divers and ship stability once sunk) that will be completed in the Cayman Islands. The final cutouts (approximately 10 cutouts on the sides of the exterior hull, cutouts on the weather decks for vertical access and removal of plates covering portals and hatches that were sealed on exterior decks for water-tight integrity during transport) will be left until the Kittiwake is towed to Cayman in order to maintain watertight hull integrity for safe towage to Cayman and insurance purposes.

The CIG/CIDO is a party to the *International Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter, 1972 as amended by the 1996 Protocol* (a.k.a.

The London Dumping Convention). This convention has been implemented in Cayman through legislation in the Merchant Shipping (Marine Pollution) Law, 2001 in Part VII sections 173 – 189 and schedules 16 - 17. In short this law gives an obligation to the Director of the Department of the Environment to regulate the types of materials that may be disposed of at sea. If an application for disposal at sea meets the criteria under this law then the Director may issue an Ocean Disposal Permit. It is this law that enables the department to act as regulators for the clean-up and sinking of the Kittiwake. In practical terms this permit will not be an issue since the CIDOE is participating as advisors throughout the various stages of the project. Assuming that the site selection, Kittiwake preparations, sinking plan and maintenance plan are all carried out per our agreement then we will have complied with the terms of the convention.

CIDOE will issue the Ocean Disposal Permit once the Coastal Works License has been approved. Additional information on this process is included under Regulatory Permits in Part IV of this Application.

All asbestos or accessible/non-sealed areas possibly containing asbestos will be inspected and assessed. All loose, exposed or asbestos that is likely to become loose or exposed, will be removed. This includes areas around cutouts in the bulkheads and decks, air vents and any areas that would be susceptible to having friable asbestos dislodged during sinking. A ship wide assessment will be completed to determine what asbestos should be removed, encapsulated/sealed or left undisturbed. This will be done after other HAZMAT have been remediated and removed and after diver reefing preparations and cut outs have occurred. This will insure that the final state of the Kittiwake for inspections, towing and sinking, will not have friable asbestos exposed. Asbestos will be handled under the guidelines of the Clean Air Act and as further identified in the ***Reefing Plan – Appendix E (I) – Process control for Asbestos.***

After remediation and reefing preparation, a final vacuum using a HEPA (high efficiency particulate air) filter will be completed to remove any exfoliated paints and debris, asbestos fibers and the like.

Additionally most diver safety/readiness preparations will be completed including the removal of flotsam, electrical cabling, machinery/furniture for safe access for divers, wood panels, and the like.

- d. Complete description of any hull and structural modifications to be accomplished to make the vessel suitable for use as an artificial reef, along with the plan to accomplish this work.

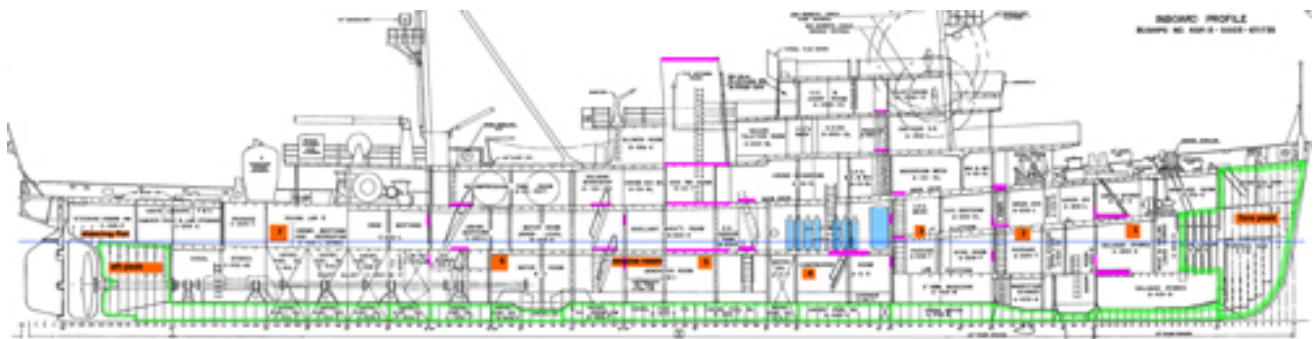
The Kittiwake is a multi-compartment vessel, having 18 compartments/bulkheads that can be sealed for watertight integrity in the event of a breach when the Kittiwake was in active duty. Our plan for the reefing preparations on the Kittiwake is to have external cutouts both on topside decks and just above the water line and internal vertical cutouts between bulkheads, or expanding the area of a hatch, to ensure that easy access to an exit or the surface is available for all divers that visit the Kittiwake.

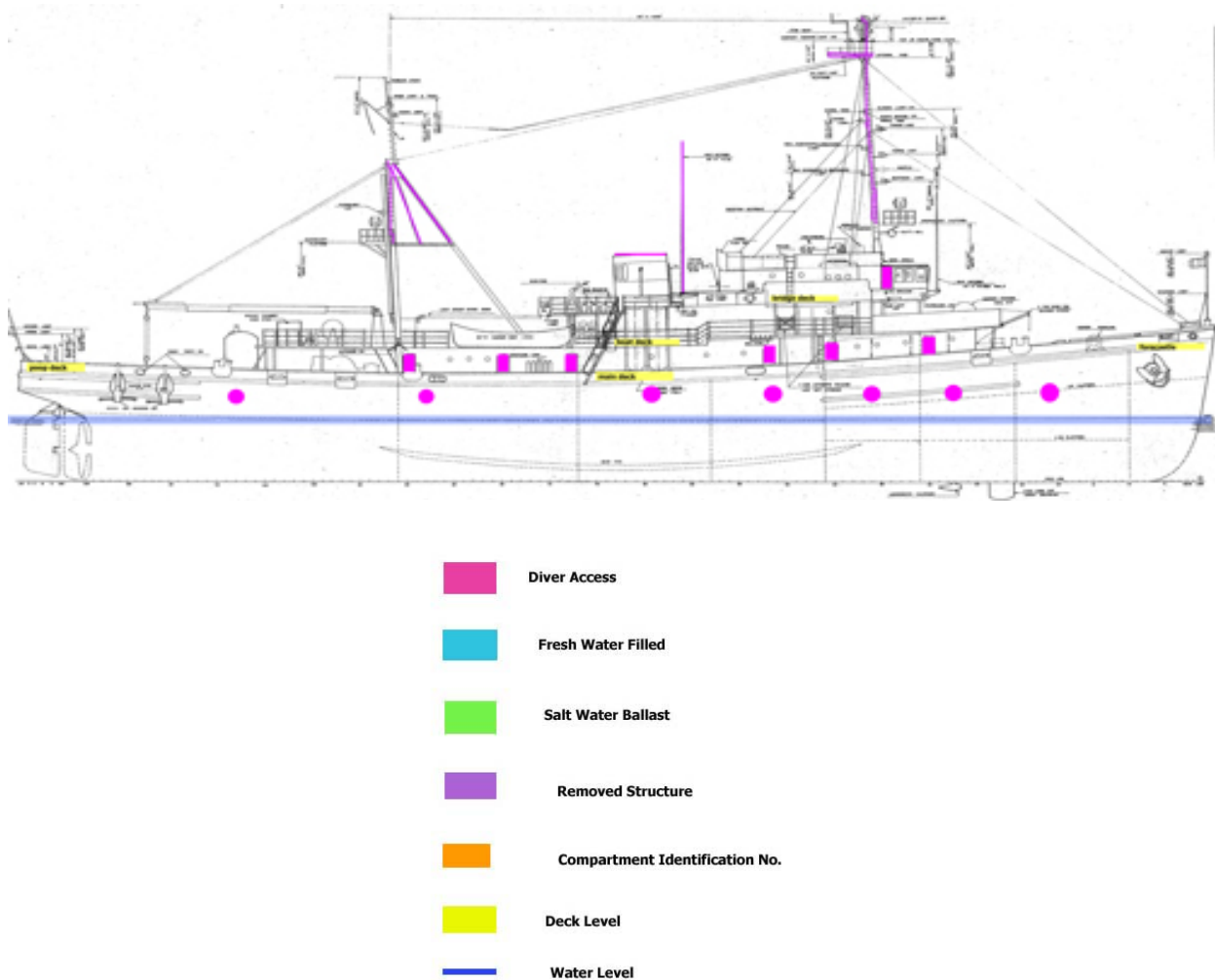
Approximately every 50 feet (vertical and horizontal), there will be a cutout in the Kittiwake (minimum size 4' x 4') to allow for light penetration into the Kittiwake for marine life, and for divers to have an entry/exit point to the surface at any time, including low air supply or no decompression limits reached. Cutouts will be made on all decks in the internal bulkheads for vertical access throughout the Kittiwake. Cutouts on the decks themselves will be made from the lowest level ceilings to the external upper deck allowing vertical access from the bow, amidships and stern areas. This will also allow for adequate water and sand flow throughout the Kittiwake, creating the most secure positioning of the Kittiwake once sunk.

The stack will be gutted also, allowing diver entry and exit up and down the stack.

The cutouts will be done by cutting square panels of steel from the ship then rounding all edges to remove any jagged points of potential entanglements. Final cutouts done in Cayman will be prepped in advance in the US, with handles in place on the cutout area for easy lifting onto the WIM barge by a diver or crane (as applicable) once the cutout has been completed.

All cutouts will be labeled with letter and number identification, from upper to lower decks labeled A – F and vertical cutouts labeled 1 – 10 from bow to stern, or as appropriate. The Kittiwake layout and entry/exit points, including where moorings are placed, will be available to divers on slates and on-board dive/snorkel boats for easy identification of the area that an individual is at on the Kittiwake at any given time, as well as the nearest exit point in the case of divers. The ships General Arrangements, overlaid with all dive cutouts and air vents have been sent to MARAD, EPA and CIDE0 in hard copy format. The General Arrangements for the Kittiwake were very difficult and time consuming to acquire and the quality of them was poor. However, we have obtained them and made large scale copies in order to place the paint samples on them and to designate the cutout areas for diver access and air venting holes. Samples of these cutouts are shown following for reference:





This will be complimented with a slate that can be taken underwater that identifies all exit points, labeled in the same manner as the Kittiwake cutouts. All exit points from the Kittiwake will be painted on, to allow for internal/underwater visual reference for divers (and kept clean of algae growth during the monthly inspections), thereby letting divers know their orientation on the Kittiwake. Also included will be the location of the mooring balls so that divers may move to the nearest point with a line to the surface if and when needed. All dives/snorkel trips will be supervised or guided in any event on the Kittiwake with access from a dive/snorkel boat operated by a member of the CITA and licensed to visit the Kittiwake.

Sufficient steel and bulkheads will remain on the Kittiwake to maintain the ships overall integrity for the international tow.

Part IV. Estimated time of reef construction

- a. Provide a schedule of the entire project to include all major activities and milestones from conveyance of vessel to sinking of vessel. The activities listed in part III c shall be included in the schedule if accomplished by the applicant; otherwise identify the

completion of any vessel preparation work accomplished under a Navy or MARAD contract.

[Appendix 10](#) contains the complete, detailed project timelines and milestones as of October 2008. No work other than assistance from Navy for the removal of the Kittiwake from the JRRF and timely inspections and sign off on various phases of the project will be completed by Navy or MARAD. As the Kittiwake is currently barged with other ships, we need assistance to have the Kittiwake released/broken loose from the other ships for clear towage, and escort from JRRF (if deemed necessary by MARAD/Navy).



Kittiwake in the JRRF (second ship from left)

In summary format, the following represents our timeline:

2008

October	Submission of final Application and Reefing Plan to MARAD & EPA
November	Completion of the Transfer Agreement between CIG and MARAD Review and approvals from MARAD, EPA and CIDOE on the Application and Reefing Plan
December	Transfer of the Kittiwake to the CIG Tow of the Kittiwake from JRRF to DMG shipyard

2009

Jan – April	Remediation and Diver Prep of the Kittiwake
May	Inspections and approvals for export Issuance of all final permits
June	Tow the Kittiwake to the Cayman Islands
June – July	Final preparations for the sinking and sinking of the Kittiwake

b. Identify and address the availability of any and all regulatory permits necessary to sink the vessel as an artificial reef.

There is 1 license, 1 permit and 1 approval required from the Cayman Islands regulatory authorities to sink the Kittiwake in the Cayman Islands. These are noted following:

1 – Coastal Works License: This license is obtained from the Cayman Islands Cabinet/Government through submission by the Ministry of the Environment. The license is granted following the submission of a Coastal Works application and subsequent review from all appropriate Government departments. This application is reviewed by the CIDOE, Port Authority of the Cayman Islands and other such departments as may be deemed appropriate for a given application. A copy of the application for the Coastal Works License is included in Appendix 11a of this Application. A copy of the final license will be provided to MARAD and EPA once it has been received, which will be prior to export of the Kittiwake from the US. The Coastal Works License cannot be granted until such time as the CIDOE has inspected and approved the Kittiwake for import to the Cayman, which is after all remediation efforts have been completed. The Kittiwake project has been reviewed and approval in principal by Cabinet.

A letter from the CIG is included in Appendix 11b that gives conditional approval for the Coastal Works License, with the final permit being issued as noted above. A copy of the approved Coastal Works License will be provided to MARAD and EPA prior to export of the Kittiwake from the US to Cayman. *The conditions on the approval relate to final inspections to insure that proper remediation of the Kittiwake was met for environmental and regulatory compliance.*

2 – Ocean Disposal Permit: This permit is obtained from the Director of the CIDOE as prescribed by the *Merchant Shipping (Marine Pollution) Law, 2001 Part VII* and is a double check and balance system to protect the environment, reefs and coastal areas of the Cayman Islands. A copy of this permit will be provided to MARAD and EPA once it has been received. The permit to sink a vessel, which falls under the parameters of the London Dumping Convention, cannot be granted until the Coastal Works License has been approved, but will be issued shortly thereafter.

3 – Approval from the Port Authority of the Cayman Islands. The Port Authority regulates the Port and coastal waters of the Cayman Islands. Approval is required from the Port Authority relative to the placement of the Kittiwake in the ocean, navigational clearance from the surface, and a suitable navigational marker in the event that a larger ship or ocean going vessel were to inadvertently move into the vicinity of the Kittiwake. The Director of the Port Authority also acts as the Receiver of Wrecks for the Cayman Islands. This approval is a part of the process for granting a Coastal Works License as the Port Authority is involved in commenting on and agreeing to the Coastal Works License. The Port Authority falls under the jurisdiction of the Ministry of the Environment, which Ministry is responsible for taking the Coastal Works License to Cabinet for approval. A copy of the acceptance of the sinking site from the Cayman Islands Port Authority is included in Appendix 11c of this Application.

Part II (Navigation) Section 25:

No wreck shall be sunk or other object, other than a mark or buoy for which permission has been obtained under regulation 29, placed on the ocean bed without the permission of the Governor in Council. An application for such permission shall be made to the Authority, which shall before forwarding its recommendation thereon to the Governor in Council, obtain the advice of the Minister responsible for natural resource matters.

In principal, as the Ministry of the Environment, the CIDOE and the Port Authority have been active participants of the Kittiwake project from its inception, there are no obstacles that are perceived and all parties are working in cooperation to accomplish these approvals at the appropriate time.

The permit and license cannot be granted until such time as final inspections of the Kittiwake have been completed to the satisfaction of the CIDOE, ensuring that no HAZMAT nor flotsam remain on the Kittiwake, that hull cleaning has been completed and that no environmental hazards to the Cayman Islands marine environment are found. As such, we require the Kittiwake to be transferred to the Cayman Islands and the remediation work completed for final inspections, prior to the permit and license being issued.

This matter has been discussed with MARAD and agreed by all parties that a conditional acceptance would be acceptable as it is not possible to provide final copies without first acquiring the ship and secondly remediating the ship and lastly having the final inspections completed to the satisfaction of all parties.

Additionally we have provided an exemption from the CIG that provides a waiver of any customs fees/duty for the importation of the ship. This letter is included as [Appendix 11d](#).

Identify all regulatory agencies requiring an inspection of the vessel prior to sinking and the purpose of such inspections.

There is only 1 regulatory agency in Cayman (apart from US regulatory agencies including MARAD, EPA, DEQ, US Coast Guard) that will require final inspections of the Kittiwake in the US as noted following:

Cayman Islands Department of the Environment. The responsibility that CIDOE has involves ensuring that all HAZMAT, flotsam materials that could come loose and damage the natural reefs, and all access for diver safety issues have been suitably met. CIDOE will also review the independent third party reports prepared after remediation from EPI, copies of documentation provided by US regulators, lab reports from the final paint sampling and video of the hull cleaning. The CIDOE has visited the Kittiwake twice spending a total of 8 days on board and will visit the ship again for interim and final inspections in Virginia, prior to the Kittiwake being exported from the US.

Upon satisfactory results and meeting the standards of the **Reefing Plan**, this Application, conformance to the BMP guidelines, CIDOE will be in a position to provide their final comments for the Coastal Works License to the Ministry for Cabinet approval, and be able to issue the Ocean Disposal Permit.

In addition to regulatory agencies, other NGO's will accompany the CIDOE on inspections, including our contractors DMG and WIM, and CITA and EPI in addition to other subcontracts as needed from time to time.

MARAD, EPA, US Coast Guard, Virginia DEQ and CIDOE will be invited and welcomed at all inspections. We anticipate 3 inspections during the 4-month remediation and diver preparedness of the Kittiwake, but more inspections can be completed upon reasonable request of any regulatory authority. All inspections will take place at the shipyard of DMG in Virginia. Suitable sufficient notice with selection and approval on dates that meet the schedules of all parties will be attempted at all times. The dates suggested following can be revised as the project progresses if need be. It is our goal to have the Kittiwake under international tow by no later than June 2009. It is important to our project that inspections are not unreasonably delayed, as we will not tow the Kittiwake to Cayman in the fall time frame, due to the increased frequency of hurricanes. If we cannot tow the Kittiwake to Cayman in the summer months, then we will have to lay her up until hurricane season passes. This will increase costs to the project.

Initial Inspection:	Dec 2008	Pre-remediation inspection to ascertain the current state of the Kittiwake; final plans reviewed for any modifications, removals, additions, sinking preparations, etc. Discuss and resolve any concerns raised, facilitate future documentation review;
Interim inspection:	Mar 2009	On-site review of project completion and documentation, over all progress to date; finalize any additional needs as remediation has continued; discuss and resolve any concerns raised;
Final inspection:	May 2009	Our plan is to have EPI perform the first final inspection, including the re-sampling of the ship for PCBs in paint and a ship-wide visual inspection of the readiness state of the Kittiwake for all HAZMAT removal. Following receiving the reports back from EPI, all parties will perform a final visual inspection of the Kittiwake. Once all parties have approved that compliance with the BMP, Reefing Plan and Application have been met, the final permits can then be issued. With verbal approvals from all regulatory authorities, the hull will then be cleaned as we make the final preparations for the international tow.

Part V. Location of Vessel Sinking

- a. Define geographical position by latitude/longitude (degrees, minutes, and seconds) or bearing and distance from charter landmark, complete with annotated charts indicating planned orientation of ship in reef, reef site dimensions, and relationship of this application to past and planned reef construction in this area.

The Kittiwake will be sunk on the west side of Grand Cayman. The selected sinking site is in an area with a sand bottom with depths of approximately 65 feet, referred to as Site #5 in our project. This area is on the lee side/western side of Grand Cayman. There are no reef construction sites, past or present that impact this Application. All areas are outside of the normal shipping lanes for cruise ships and freighters arriving into Cayman. This area is in a Marine Park Zone, which implies special restrictions for use of the area as identified in this section under Point c. following.

Site #5 - North of Sand Chute

The Kittiwake sinking site lays in an approximate north to south direction off the leeward side of Grand Cayman as approved by the CIDOE and the Cayman Islands Port Authority. It is intended to sink the vessel with the bow pointing as close as possible to the northwest and the stern towards the shore in a northwest to southeast direction off Seven Mile Beach at the GPS coordinates of:

Latitude: 19 21.714'N 081 24.073W Bow

Longitude: 19 21.688'N 081 24.044W Stern

Sea Reference: The site is located just off of the Sand Chute Dive Mooring

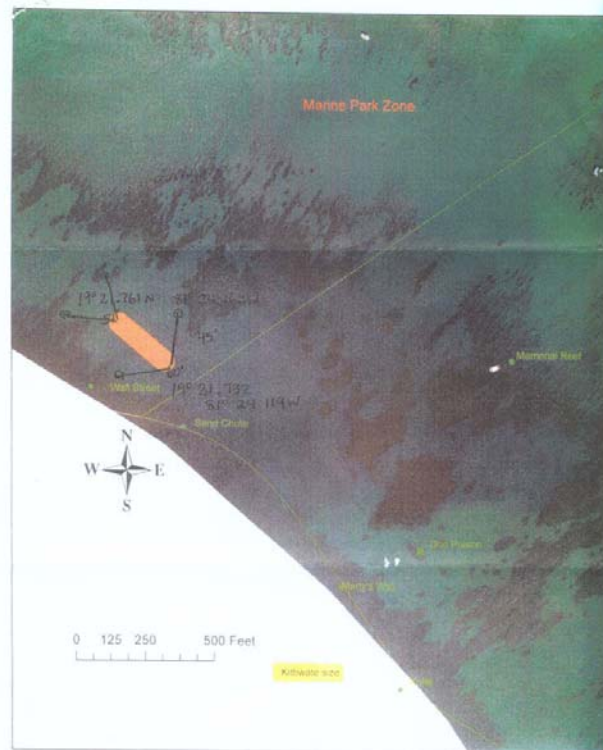
Bottom Composition: The area is very flat with a sand bottom

Depths: Stern: 56 feet Bow: 64 feet

Maximum vessel height after remediation: 48 feet

Minimum draft clearance: 14 feet

A DVD of the site survey was provided to the CIDOE.



The Kittiwake site in relation to Grand Cayman (represented by the red dot)

- b. Identify ocean conditions, including depth of water bottom and seabed conditions in immediate and general area of proposed reef. Identify depth of water over reef at minimum and maximum tidal conditions and required navigational draft. Attention should be given to the susceptibility of the area to large-scale wave or transport phenomena, which might cover the reef with sand or otherwise limit its usefulness as a fishery resource. Give weather information as it affects water movements and coastal energy levels seasonally and cyclically.

Ocean conditions on the west side of Grand Cayman are normally flat with minimal currents. This is the lee side of Grand Cayman.

Cayman tidal conditions are approximately 1 meter between low and high tide. The Kittiwake sinking site is over 600 yards offshore. The depth of the ship will be in approximately 65 feet of water with a minimum distance from any natural corals reefs of 100 feet. .

Prevailing winter winds are NE (ESE) and summer winds are SE (ESE). The majority of storms occur in the wintertime, commonly referred to as Nor'westers with the winds and seas coming from the northwest direction.

The sinking site is void of any coral growth. The bottom composition is fine sand. The general slope is 10 degrees or less from 65 to 51 feet over a span of 260 feet with a gradual slope to the deep wall/outer coral ridge. The location is a suitable distance from the deep wall/drop-off, with a rising coral reef between the Kittiwake and the wall. The future stability of the ship is primarily focused on the Kittiwake not moving closer into shore.

The Kittiwake will be cut off to a maximum height of 48 feet, cutting the A-Frame at the stern and forward mast to provide a minimum of 14-15 feet of clearance to the surface, as required by the Port Authority of the Cayman Islands. This height is measured at or above the Bridge, which will be the highest remaining structure.

In conjunction with many cutouts in the Kittiwake, we believe that we have an ideal location for the Kittiwake. We have several other ships that have been sunk in the Cayman Islands, and the life-span of remaining ships that are intact and have been unaffected by major ocean storms (although some have deterioration issues) runs in the 25 year+ range, with existing ships having no cutouts to allow water and sand movement through them. Existing ships/wrecks also are not of the same tonnage or hull construction that the Kittiwake is. (They are thinner hulls, less tonnage/weight)

Hurricanes have been taken into consideration in the site selection of the Kittiwake. We believe that given the approximately 2,200 tons of solid steel hull ship and all of the cutouts that will allow water flow and sand movement through her, that the Kittiwake will remain in the original sinking location. However, we will also have a 5-point anchoring system, as further defined in the Sinking Plan, [Appendix 2](#).

Additionally, a substantial mitigation fund is being accumulated over the next 4 years, to be reserved exclusively for any environmental mitigation in the event of the vessel moving closer to natural reefs or eventual deterioration causing pieces of the Kittiwake to break off. This is further defined in our Financial Management Plan attached as [Appendix 12](#).

The Cayman Islands recognizes that deterioration over time will require ongoing maintenance of the Kittiwake. All loose debris, wood, tiles, flotsam will be removed as applicable during the dive preparedness phase of the cleaning. Some items, predominantly below deck (such as a steel bunk) will remain, and eventual deterioration of these items will be handled in the ongoing maintenance of the Kittiwake. The ongoing Maintenance Plan for the Kittiwake and her attached anchors (once the Kittiwake is sunk) will include monthly inspections, repairs, removal of any loose materials that are manageable by the dive team, repairing mooring balls/lines/chain/shackle and the like. The details of the Maintenance Plan are further defined in [Appendix 13](#).

c. Effects of reef on other uses of area including:

- Navigation considerations, including modifications of existing channels and procedures of States to ensure nautical chart corrections

There are no amendments to navigational charts required to sink the Kittiwake in the intended reefing site.

The Port Authority of the Cayman Islands has provided guidelines that include:

- a minimum of 15 feet clearance to the surface for navigation
- a navigational marker/buoy to be installed on the Kittiwake to warn any freight/cruise ships of the navigational hazard.

The sinking site is not in any shipping lanes or traffic paths that would effect navigation of any ocean going vessel, and will be at a depth that will allow any local dive/snorkel boats clear access to the site.

There are no channels that will be affected. The Kittiwake will be sunk near shore, but in ‘open’ ocean.

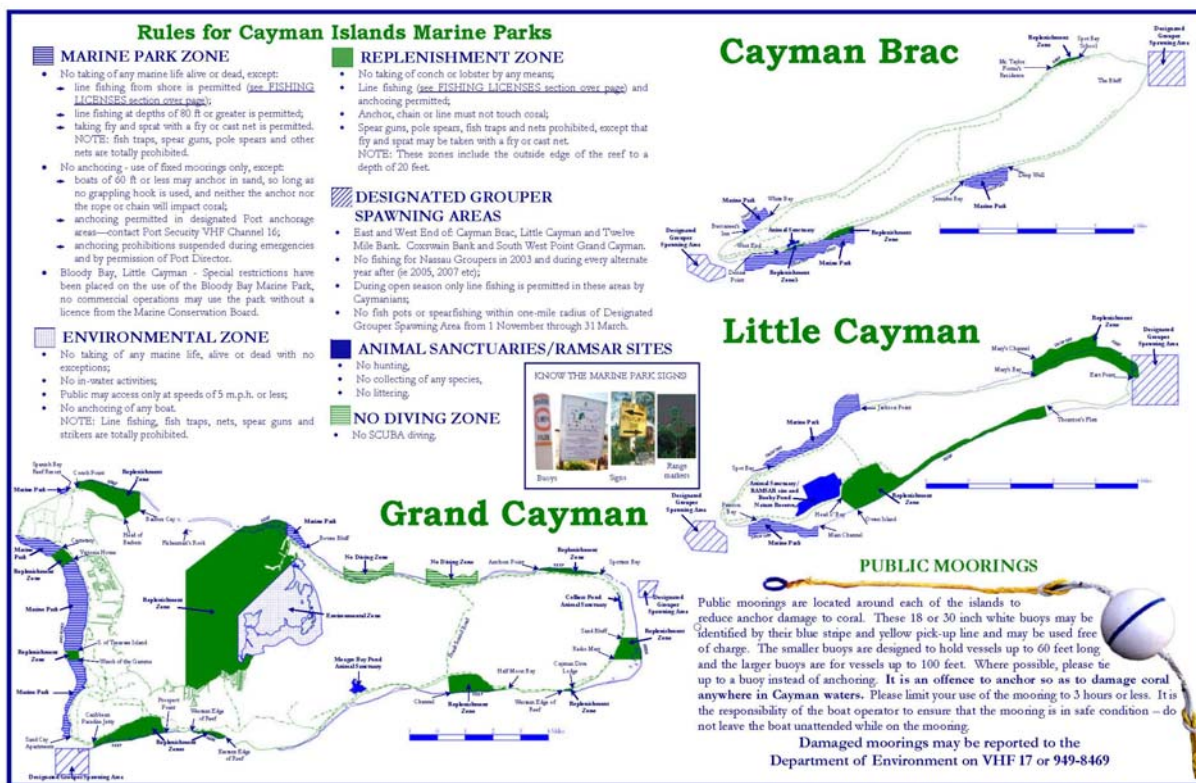
- Interference with commercial fishing

The Kittiwake will not be sunk in an area that will effect any commercial fishing operations. There is no ‘mass’ commercial fishing in the Cayman Islands. The Kittiwake will be sunk in a Marine Park Zone, with the fishing restrictions already in place for these zones.

By placing the Kittiwake in a Marine Park, fishing will not be allowed. Marine Parks are already enacted into law as being no fishing areas. This is intended as a protection measure for the fish, which can congregate on wrecks and to prevent over-fishing in a concentrated, specific area.

Following please find a map of from the CIDOE that identifies specific environmental zones and restrictions on these zones in the Cayman Islands. The following chart can be found (for enhanced readability) at:

<http://www.gov.ky/pls/portal/docs/PAGE/CIGHOME/FIND/ORGANISATIONS/AZAGENCIE/ENV/DOCUMENTS/MARINEPARKSSEPTEMBER2007.PDF>



SUMMARY OF CAYMAN ISLANDS MARINE CONSERVATION LAWS

LOBSTERS

- Closed season:** 1 March through 30 November. No one may take lobster from Cayman waters during these months. No one may purchase, receive or possess lobster taken from Cayman waters during these months.
- Open season catch limit:** Three per person or six per boat per day, whichever is less.
- Size limit:** Six inch tail minimum size.
- Only spiny lobster (*P. argus*) may be taken.

CONCH

- Closed season:** 1 May through 31 October. No one may take conch from Cayman waters during these months. No one may purchase, receive or possess conch taken from Cayman waters during these months.
- Open season catch limit:** Five per person or ten per boat per day, whichever is less.
- No one may purchase or receive more than five conch from Cayman waters in any one day.

WHELKS

- Closed season:** 1 May through 31 October. No one may take whelk from Cayman waters during these months. No one may purchase, receive or possess whelk taken from Cayman waters during these months.
- Open season catch limit:** Two-and-a-half gallons in the shell or two-and-a-half pounds of processed whelks per person per day.
- No one may purchase or receive more than two-and-a-half gallons in the shell or two-and-a-half pounds of processed whelks from Cayman waters in any one day.
- Clams, periwinkles and bleeding teeth may not be taken from Cayman waters at any time.

ECHINODERMS

- Echinoderms (includes starfish, sea eggs/urchins, sea cucumber, sand dollars etc) may not be taken from Cayman waters at any time.

TURTLES

- No one may disturb, molest or take turtles in Cayman waters without a licence from the Marine Conservation Board.
- Possession of turtle eggs is prohibited.
- For licensed fishermen, closed season runs from 1 May through 31 October.

SHARKS

- No one may feed, attempt to feed or provide or use food to attract any shark in Cayman waters.

NASSAU GROUPERS

- Designated Grouper Spawning Areas are protected.**
- Closed season:** 1 January through 31 December 2003 and every alternate year thereafter (i.e. 2005, 2007, 2009 etc.).
- Open season catch limit:** (2004, 2006, 2008 etc.) twelve grouper per person or per boat per day applies in these areas.
- During open season, only line fishing is permitted in these areas by Caymanians.
- Size limit:** Twelve inch minimum size limit applies throughout Cayman waters year round.

OTHER FISH

- Protected fish:** Jew fish, tilfish (whitfish), flakefish (pipers) and angelfish, including Grey, French and Queen angels (old monks), may not be taken from Cayman waters at any time.
- Size limit:** Eight-inch minimum size on all other fish except goggle eyes, lionfishes (including sprats), anchovies and silversides (including loggerhead and fine fry).

FISH POT

- Must be licensed by the Marine Conservation Board.
- Only Caymanians over 18 may be granted licences.
- Only two pots per family and pots must be identified with a DOE tag.
- No fish pot may be set within a one-mile radius of any Designated Grouper Spawning Area from 1 November through 31 March.

SPEAR GUNS & SEINE NETS

- No one may use a speargun (includes Hawaiian sling, pole spear, harpoon, bookstick or any device with a pointed end which may be used to impale, stab or pierce any marine life but does not include a strike or seine net without a licence from the Marine Conservation Board. NOTE: A strike is defined as a wooden pole, no shorter than 10 feet, with a maximum of 2 barb-less prongs attached to one end.
- No one may possess a speargun without a licence.
- No one may import a speargun or any parts for a speargun.
- Only Caymanians over 18 may be granted licences.
- Speargun catch limit:** Three fish per licensed person per day.
- No one may possess more than six fish that have been caught by a speargun.
- No one may spearfish within a one-mile radius of any Designated Grouper Spawning Area from 1 November through 31 March.

FISHING LICENSES

- Unless licensed by the Marine Conservation Board, residents who do NOT possess Caymanian Status may not take or attempt to take, by any means, any marine life while he is on shore or in any part of Cayman waters in which he can stand.
- No licence is required for catch and release fishing.

GENERAL RULES

- Damaging coral by anchor, chains or any other means ANYWHERE in Cayman waters is prohibited.
- No taking of ANY marine life alive or dead while on SCUBA.
- No taking of any coral, sponges, etc. from Cayman waters.
- Wearing gloves while diving or snorkelling in Cayman waters is prohibited.
- Export of live fish or other marine life is prohibited.
- Fishing with gill nets, poison or other noxious substances is prohibited.
- Dumping ANYTHING in Cayman waters is prohibited.
- The export of conch shells and or black coral requires a CITES permit, issued through the DOE.

PENALTIES

Violation of any of these laws is an offence carrying a maximum penalty of C\$500,000 fine and one year in jail. Upon conviction, forfeiture of the vessel or other equipment may also be ordered.

Call for further information
Department of Environment
580 North Sound Way, Grand Cayman.

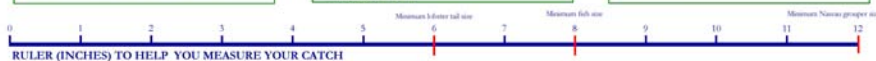
Phone: 949-8469 Fax: 949-4020
Cayman Brac: 926-0136
Little Cayman: 926-0135
VHF: Channel 17

Report offences to VHF 17, 948-6002 or 911
Report oil spills or other marine pollution to the DOE 949-8469 or 911
WEBSITE: www.gov.ky/doe
EMAIL: doe@gov.ky

Marine Park Regulations & Marine Conservation Laws Cayman Islands



Department of Environment



- Any uses of the area that will be curtailed by reef building, including commercial, recreational and aesthetic uses.

There will be no areas of use that are curtailed. The dive/snorkel artificial reefing site selected will be appropriate for the sinking of the Kittiwake as this area is already used for diving on the deep wall. The Kittiwake will offer a shallower dive and snorkel site inside the deep wall in the sand flats.

- Any enhancement of the area other than fishing benefits, likely to result from reef building

The addition of the Kittiwake to our dive/snorkel product will also allow us to spread our divers/snorklers to a new area, thereby reducing stress on some of the more popular locations on the west side of Grand Cayman and at Stingray City/Sandbar area. While the Kittiwake is not intended to benefit the area in which it is being sunk (although this is possible, but we do not know), we anticipate it will ease environmental stress and safety concerns at other sites. While Cayman is surrounded by natural reefs, polls indicate that wrecks are a number 1 request for divers and snorklers to go to, which supports our goal of diversification to the natural marine environment.

Additionally, we anticipate the sinking of the Kittiwake and visits to her for years to come will assist in stimulating our tourism industry as a new product development initiative. The Cayman Islands relies heavily on tourism to support our Country. Over 30% of visitors here dive, and approximately 80% of visitors snorkel while visiting Cayman.

Cayman is visited by cruise ships that represent almost 2 million visitors per year. The Kittiwake will serve as a new attraction for cruise passengers and it is anticipated that by choosing the Kittiwake tour, that some benefit will be derived to our natural reefs and marine attractions.

- d. Locate and identify the following that exist or are contemplated, within a 20 mile radius of the proposed site:
 - Submerged pipelines

There are none.

- Transmission cables

There are none.

- Coral reefs, recreation beaches, commercial fishing areas, and other sites having historic or cultural value.

The selected site location is clear of natural coral reefs for a minimum distance of 100 feet from the Kittiwake and 600+ yards offshore. The distance of the Kittiwake from shore will not affect any beach activity. There are no historical or cultural issues that will affect placing the Kittiwake in the intended location. No beaches will be affected.

e. Method of Marking Location Reef Location:

- Type of buoy

A navigational marker buoy on the top of the Bridge will be installed by the Cayman Islands Port Authority/WIM for notice to all ships. The buoy will be a ships channel marker in bright yellow with a white light on it.

Multiple dive/snorkel boat buoys/moorings (4 are anticipated) will also be placed on the Kittiwake that will be installed by the CIDOE (or approved contractor). The CIDOE and the Port Authority, in addition to private sector contractors perform this type of work for mooring installations on a regular basis and have all suitable equipment to accomplish this task. The Cayman Islands have about 300 dive/snorkel buoys installed throughout our Marine Parks at this time, as well as many commercial buoys.

The GPS coordinates of all moorings are also documented by the CIDOE.

- Charting

No charting amendments are required.

- Depth of water

The Kittiwake will be sunk in a minimum of 60 feet of salt water.

- Buoy maintenance

The CIDOE will maintain the dive/snorkel buoys as normal for all dive/snorkel mooring sites in the Cayman Islands.

The ongoing maintenance on the Kittiwake is a part of the CITA future lease for the Kittiwake attraction with the CGI. Agreement to pay a fee to visit the Kittiwake has been agreed to by the 3 watersports associations in Cayman, namely: CITA, Land & Sea Cooperative and the Cayman National Watersports Association.

Additionally long-term maintenance of the Kittiwake is a priority to the CIDOE and the CITA and is supported through our Financial Management Plan [Appendix 12](#) and Maintenance Plan [Appendix 13](#).

- Minimum of depth of water over sunken ship when in place

There will be 14-15 feet minimum clearance to the surface (height of the bridge). The bridge is a 40 x 40 foot area, with the majority of the ship (over 200 feet of the Kittiwake) at a depth of 35 feet.

Part VI. Provide Plan and Procedures for Vessel Sinking (Including professional experience of persons who will accomplish and supervise the sinking.)

The plan for the Kittiwake sinking is to have the Kittiwake cleaned, including diver readiness (above waterline and inside cutouts completed) in the US and then tow the Kittiwake to Georgetown Harbour in Grand Cayman.

Once in Cayman, dock/mooring access will allow site visitations and final cutouts and sinking preparations to be completed.

WIM (Cayman) is our contractor to standby the Kittiwake until sunk (tug and barge), prepare and cut the final waterline cutouts and sink the Kittiwake. WIM is fully insured to carry out the marine contracting and standby towing work. John MacKenzie is the Managing Director of WIM and will be responsible for the sinking of the Kittiwake. A copy of the sinking plan is included in Appendix 2 of this Application for further details, including qualifications and photos of WIM vessels.

Additionally, Tim Mullane of DMG will be coming to Cayman to assist in the sinking operations, given that he will be very familiar with the Kittiwake from the remediation and diver preparedness phases of this project. John MacKenzie and Tim Mullane have and will continue to work closely together during the remediation phase, to insure that all air escape vents, bulkhead cutouts for divers, anchors and chain, eye pads, and needs to insure successful sinking are completed (to the extent possible) in the US.

The Kittiwake will be sunk using controlled flooding, the details of which can be found in the sinking plan.

We will also invite any crew members or family of crew from the Kittiwake to come and see her final resting ground.

Part VII. Conservation Goals

- a. Provide statement of short term and long range conservation goals

The Cayman Islands is a leader in marine conservation. We have had mooring balls in place for the past 35+ years to inhibit anchoring near or on our reefs. We have Marine Park Zones, Replenishment Zones and Environmental Zones established and have introduced new legislation to better manage the number one attraction of Stingray City/Sandbar, in the form of the 'Wildlife Interaction Zones' (WIZ).

The Cayman Islands has a Marine Conservation Board and Law that is readily available to the public with respect to our short term and long range conservation goals. On September 21, 2001 as part of the objectives of the Partnership for Progress and Prosperity for the Overseas Territories, the Cayman Islands signed the Environmental Charter with Her Majesty's Government (Britain). The National Conservation Law (draft) is expected to be reviewed by Cabinet in the near future. The National Conservation Law (draft) is intended to update

environmental legislation in an effort to strengthen the protection of Cayman's natural resources, while promoting sustainable development and mitigating the impact of climate change. It is also part of government's effort to meet international environmental treaties.

The sinking of the Kittiwake in Grand Cayman is intended as a 2-fold approach to sustainable tourism:

Firstly, create a new product development (artificial reef) as a tourist attraction, to entice visitors to come or return to Cayman.

Secondly, reduce the stress at our #1 'tour' Stingray City/Sandbar. Among other conditions, the WIZ put limits on the number of visitors at one time, number of boats at one time and other various marine conservation initiatives.

The addition of the new product development of the Kittiwake will help us to disperse visitors to our islands over a variety of sites, thus decreasing the stress on surrounding reefs to the #1 major attraction of Stingray City, creating a net positive environmental impact at both the sinking site and at Stingray City.

- b. If available, provide a fisheries analysis, including a "with and without" ship reef study of:
 - Sports fishery benefits, including annual catch and worth

There are no perceived benefits nor detriments to the sport fishing industry as the Kittiwake will be inside the drop off (deep wall) where restricted fishing limits and laws are already in place for Marine Park Zones. The zoning of the site is intended to minimize fishing. As an artificial reef and due to the expected congregation of schools of fish on the Kittiwake the placement of the Kittiwake in a Marine Park Zone will negate new regulations/laws to specifically zone this area. The Kittiwake initiative is designed to be a dive/snorkel/submarine ride experience for visitors and residents to our islands. The benefit of having a new wreck dive/snorkel site is anticipated to increase tourism to our islands through the dive/snorkel travel market. There is no benefit to the sport fishery industry nor is any dollar amount placed on this, positive or negative.

- Ecosystem, including productivity, species diversity, and population dynamic

The eco system in the area surrounding the Kittiwake site is healthy. We do not have specific information on the population dynamics, but there are, in general, about 200 species of reef fish that inhabit the area.

Part VIII. Preparation costs and funding

- a. Attach copies of all cost estimates for all major activities to be accomplished by the applicant, including towing, environmental preparation, and sinking of the vessel. The activities listed in part III c shall be included in the cost estimate if accomplished by the applicant.

- b. Attach a statement of availability and source of funds required to cover the costs included in the submitted cost estimate. If the project is not fully funded submit a schedule of acquisition of additional funding.

A complete budget for all phases of the project is included above in section III c. The contractors retained for phases 1 through 3 (remediation, towing, sinking) have committed fixed bid contracts for all work efforts.

Four incremental costs have been incurred from the original bids. This includes historical maintenance record research, paint sampling (4 times), hiring EPI as an independent third party inspector and increased administrative costs due to the submittal of 4 applications and reefing plans. The incremental costs have been paid or are accounted for the in budget.

The funds for the project are secure, including a contingency fund for cost overruns and on going maintenance of the Kittiwake.

Part IX. Permits

- a. Provide a copy of the U.S. Army Corps of Engineers 404 Permit for the proposed reef site or a copy of the application for the 404 Permit and a Permit Application status from the Army Corps.

The US Army Corps pf Engineers 404 Permit is not applicable in the Cayman Islands.

Additional information not included in the previous Applications but requested in February 2006 by MARAD or the EPA in May 2007 is noted following:

Insurance: Both DMG and WIM have suitable insurance coverage in place for work on the Kittiwake while the ship is under their control. The CIG and the CITA are both co-insured on the DMG policy and will also be added as co-insured on the WIM policy closer to the time that the Kittiwake is ready for international low. Copies of the current insurance policies are contained in **Appendix 14**.

Surety: As per MARAD request for a \$250,000. bond or surety (email from January 27th, 2006), both contractors have agreed to provide the surety/bond.

A. Submittal of a performance bond or surety for coverage in the amount of \$250,000.00 that will remain in force until the actual sinking of the vessel.

Once the approval from MARAD has been received and the ownership of the Kittiwake is transferred to the CIG, a copy of the surety will be provided to MARAD. It is too expensive to the project to request that our contractors hold a bond in place until such time as the project is ready to move forward in its various phases.

Alternate disposal option: As per EPA request in the May 2007 comments on our Nov 2006 Application and **Reefing Plan**, attached as **Appendix 16** please find a letter from Bay Bridge Enterprises, a MARAD certified ship dismantler in Chesapeake Bay, Virginia, stating that they

will take the Kittiwake for scrap should the Cayman Islands be unsuccessful in our reefing project.

De- Ratting Certificate: As requested by EPA in May 2007, an up to date re-ratting certificate will be provided prior to export of the Kittiwake. The last de-ratting certificate (that we are aware of) was issued in April 1998 when the ship was laid up in the JRRF. DMG will have this inspection and certificate issued by a qualified local inspector prior to export

Part X. Signed Certification (Attachment I)

The Certification at Attachment I is a part of and must be attached to the application.

ATTACHMENT I

CERTIFICATION

The undersigned,

Gloria McField-Nixon
Permanent Secretary and Chief Officer
Ministry of Tourism, Environment, Investment and Commerce
Cayman Islands Government

Ministry of Tourism, Environment, Investment and Commerce
4th Floor, Government Administration Building
Elgin Ave., George Town
Grand Cayman, Cayman Islands KY1-9000

hereby applies for the transfer of ship(s) pursuant to the provisions of Public Law 92-402, (16 U.S.C. 1220 et seq) as amended by H.R. 4546 Section 3504(a), for sinking and use of the ship(s) solely as an offshore artificial reef(s) for the conservation of marine life. Said Country gives it assurance to the Secretary of Transportation that the transferred ship(s) will be properly chartered when sunk; and agrees to comply with the terms and conditions as stated in fulfillment of the provisions of Public Law 92-402 as amended. Said Country further agrees to accept the ship(s) allocated in an "as is – where is" condition at no cost to the Federal Government except for any financial assistance provided under Section 7, and to remove said vessel(s) at a mutually agreed upon date to be determined.

EXECUTION

IN WITNESS WHEREOF this application has been duly executed at

The Government Administration Building, Grand Cayman this 3rd day of October, 2008.

Cayman Islands

By  _____

Gloria McField-Nixon
Permanent Secretary and Chief Officer
Ministry of Tourism, Environment, Investment and Commerce

ADDITIONAL INSTRUCTIONS:

Provide an electronic copy not to exceed 5 MB to reef@marad.dot.gov or alternatively provide a CD to:

Zoe Goss
Artificial Reefing Coordinator
US DOT, Maritime Administration
Office of the Ship Disposal Programs
1200 New Jersey Avenue, S.E. W23-498/212
Washington, DC 20590-00001
202-366-0270
zoe.goss@dot.gov

MARAD will coordinate the review and approval process with all other Federal Agencies who jointly comprise the Artificial Reefing Team (ART).

We have provided both an electronic Application and ***Reefing Plan***, plus have sent via Federal Express a hard copy and a CD version of this Application and ***Reefing Plan***.

This revision is current as of October 10, 2008 and supercedes all previous revisions to our Application and ***Reefing Plan***. This Application addresses all known previous deficiencies, including addressing the comments from EPA in their letter of May 28, 2007. The 2 previous lists of deficiencies from MARAD and the EPA are attached as ***Appendix 15*** for general reference only. If any discrepancies are found between this Application and the previous responses, this Application shall take precedent as it contains more current information.

6. Application Evaluation Criteria:

- a. A best value analysis of each application will be conducted based on an evaluation of the application's response to the following selection criteria. In selecting the transferee for a certain vessel, the Government (i.e., the agency (MARAD or Navy) having title to the vessel subject to donation for use as an artificial reef) will make a determination as to application that provides the best value to the Government.
 - Meeting the requirements of the National Fishing Enhancement Act (33 USC 2101) for the enhancement of fishery resources or diving opportunities

The National Fishing Enhancement Act does not apply to the Cayman Islands. There is no enhancement to fishing proposed, nor is there any detrimental impact on fishing with the Kittiwake project. The Cayman Islands has been renowned as a diving and snorkeling destination for 40+ years, including regulated fishing laws and zones where fishing is permitted. The Kittiwake will be sunk in a Marine Park Zone where fishing is not allowed.

- Availability of existing reef site and permit

The Cayman Islands requires the license and permit as defined in Section IV (b) of this Application. As noted previously, we have conditional approval and will provide copies of the Coastal Works License and Ocean Disposal Permit to MARAD and the EPA once inspections are complete and these have been issued.

- Plan for use, monitoring and managing the ship reef, including prevention of diver deaths

The use and monitoring of the Kittiwake is committed to by CITA as a part of our future lease agreement with the CIG. This includes a monitoring plan for diver safety as well as natural reef health. The Maintenance Plan is included in this Application as Appendix 13. The Maintenance Plan will be funded through a per visitor fee to the Kittiwake.

The Kittiwake will be sunk in recreational diving depths of approximately 65 feet. CITA dive and snorkel watersports operators in the Cayman Islands follow a Code of Ethics and sign the Safety Rules and Regulations. All watersports members are required to sign these in order to remain in active status in the CITA. The CITA is 180+ businesses in various tourism sectors, of which approximately 40 of these are watersports operators.

The Safety Rules and Regulations are on file at the CITA office and available to all members of CITA. The safety guidelines that are followed in the Cayman Islands by CITA members are known in diving circles worldwide and are the proprietary information of the CITA. These regulations will also apply to the Kittiwake. They include provisions, to name a few, such as:

- Safe diving practices
- Professional competence standards for staff
- Requirements for current boat/scuba licenses, first aid, oxygen provider, etc.
- Adherence to the Marine Conservation Laws and Port Authority regulations
- Safety equipment that must be on board and maintained
- Dive site minimum briefing information
- Courtesy practices towards other operators
- Rules of etiquette for boating, mooring and docks
- Certifications and waivers/liability
- Minimum diving or snorkeling equipment required
- Depth limits and certification level adherence
- Staff to customer ratios
- Diving supervision and unguided buddy team diving protocol
- Rules and regulations for nitrox, technical diving, decompression guidelines

Boats take guided tours to approximately 300 mooring sites, several of which are wrecks, on a daily basis and our safety record is superb. As is in place in the WIZ for Stingray City and Sandbar, a specific license will be required for any private or commercial operator to visit the Kittiwake. The license will be granted by the CITA and carry conditions attached to it including adherence to the safety standards, dive and snorkel briefings, insurance and the like. Orientation guidelines, laminated ship charts and slates, showing all mooring/entrance/egress points, will be provided to all licensees to the Kittiwake.

Certification levels for divers will be checked in advance of any dives, insuring that divers not ready for a dive on the Kittiwake or into her lower decks is not allowed. While we cannot guarantee the prevention of diver death at the Kittiwake (or any other dive site), substantial steps are being taken to insure the best possible tools, documentation and education are provided to create safe dives.

Additionally, with our Diver Reefing Plan, Appendix 7a, almost all areas of the ship will have a minimum of 2 exit points and have natural light penetration to minimize disorientation or entrapment.

A separate fund is being established by payment from the private sector to take visitors to the Kittiwake that will be used for, among other needs, the on-going maintenance, clean up if ever required, periodic inspections and buoy/navigational marker/maintenance. This will ensure that the Kittiwake will be well maintained for the safety of divers and the natural surrounding reefs. The Maintenance Plan is included as Appendix 13 of this Application. The Maintenance Plan does not call for any chemical monitoring; however any matters of concern, disease, death to the marine life, including corals, sponges, fish, etc. will be reported immediately to the CIDOE for further research.

Photo documentation will also be taken on the monthly inspection visits, to provide a timeline and scale for the growth of algae, sponges and corals on the Kittiwake.

- Impact on National Marine Sanctuaries or coral reefs

There will be no impact on any coral reefs or marine sanctuaries, only an enhancement to the environment through potential colonization of the artificial reef and potential reduction, through diversification, in the number of visitors to our natural reefs and marine attractions, by visitors choosing the Kittiwake tour.

The Kittiwake will be sunk in a Marine Park Zone which restricts fishing on the wreck to allow fish populations to colonize the ship and the project is hopeful for stimulating bio colonization from surrounding reefs to the Kittiwake.

The Kittiwake will be accessed by boats using a number of moorings (4 anticipated) versus anchorages, to prevent any potential damage to reefs, turbidity from sand disturbance and to provide reasonable yet not over-crowding access to the Kittiwake at any given time.

Cayman has a no-gloves regulation while diving or snorkeling, no touching or taking or ANY marine life living or dead whilst on scuba, backed up by environmental laws and enforcement. The Kittiwake will be sunk in a depth that will allow snorklers to have an interesting experience and be able to see a shipwreck.

- Plan for accomplishing vessel preparation requirements beyond the EPA Best Management Practices (BMP) for ship artificial reefing, or plan for accomplishing all vessel preparation requirements

This Application, the *Reefing Plan* and all accompanying appendixes are the plan to accomplish all the vessel preparation requirements. In addition to all guidelines included in the BMP, the following items will also be completed:

- Hull cleaning no sooner than 3 weeks prior to departure from US waters
- Pre-remediation paint sampling, independent third party inspections for all HAZMAT and post-remediation paint re-sampling
- Elimination of all loose/wooden/flimsy materials/flotsam that could effect the natural reef system
- Towing and sinking plan, if accomplished by the state

Not applicable

- Cost sharing proposals

We understand that we have been provisionally approved as a foreign Government artificial reefing project and that we are the first such Application, as we have been noted as the pilot project. No funds are being requested from MARAD other than the donation of the Kittiwake. The Kittiwake project will be funded by the Cayman Islands.

By separate request to Martin Walker (Martin.Walker@dot.gov), we have asked to have 2 additional anchors and chain. We now update this request to be 3 additional anchors that are between 4000pound and 5000pounds plus 9 shots (810ft) of 1.25"min - 1.5"max anchor chain donated and placed on the Kittiwake decks prior to her removal from the JRRF. The third anchor is being requested due to the upgrading of the Sinking Plan to have a 5-point anchor system. The Kittiwake has 2 x 4000 pound Danforth anchors on the starboard stern with no chain attached to them. There are also 2 bow anchors in the water that anchor the Kittiwake. It may be possible to raise these anchors, secure them for towing and use them as a part of the anchoring system after sinking. If this is possible, then only 1 additional anchor would be requested.

We will restate our specific request once we complete our next visit to the Kittiwake and have the opportunity to discuss options with MARAD. The anchors and chain, if donated, could be placed on the Kittiwake by boat or we can arrange for a truck to come by land and pick them up for land transport to the DMG shipyard.

- Availability of studies demonstrating the environmental, fishery resources, and/or economic benefits of ship reefing within the state

The Cayman Islands have been considered a leader in safety, diver education and marine conservation for many decades. The Kittiwake project will greatly enhance our ability to continue to market the islands with the inclusion of new product development in the water, and at the same time bring relief to our most popular dive/snorkel location, that being Stingray City/Sandbar.

Prior to embarking on this project, the CITA created and presented a business plan for artificial reefing to various government departments and authorities plus stakeholders in the tourism industry. The business plan was approved and supported by initial funding from both the CIG and the CITA to get the project started. The main reasons for the project included:

- *Our industry partners are demanding new product from Cayman*
- *The Kittiwake will generate more new stay-over arrivals than any other single project*
- *The most popular attraction/tour offered in Cayman today is Stingray City/Sandbar. By creating a new 'Shipwreck attraction', relief will be given to the stressed environment at Sandbar, through an exciting new location to dive/snorkel on. This concept of distributing the visitors to a variety of locations is supported by DoE.*
- *The Kittiwake will benefit all Industry sectors, and is supported by our 180+ members of CITA, Media Partners, Cayman Islands Departments and Ministry of Environment and Tourism, Port Authority, Customs, Public Works and several other Government bodies that will be involved in the project.*
- *Cruise Ship Partners will have a fantastic new series of tours to sell for divers & snorklers*
- *Media exposure will be substantial putting Cayman on the map again as #1 as a dive destination*
- *With an aggressive marketing campaign, the Kittiwake will once again position Cayman as a leader and show how our combined government & industry dynamics and partnerships can reenergize ourselves.*

The current shipwrecks in Grand Cayman including the Oro Verde, Balboa, Cali, Doc Poulson, Nicholson, Kirk Pride, Carrie Lee and other historical wrecks, have all proven to be successful in attracting visitors, and are very popular requests for tours. The Oro Verde has deteriorated over decades and the Balboa is now in the Port of Georgetown making tours there more difficult and only with the prior approval of the Port Authority. The Kirk Pride is at a depth of 800 feet and was only visited by the Submarine, but this trip is no longer available. The Carrie Lee is at a depth of 200+ feet and is only available to technical divers.

The Captain Keith Tibbetts was sunk in Cayman Brac around 10 years ago, and created a significant boost for dive tourism for Cayman Brac. There are visitor arrival statistics that show the success of the sinking of Captain Keith Tibbetts that clearly indicate that Cayman Brac, one of the sister islands, increased tourism arrivals due to the new artificial reef. As such, a new shipwreck for Grand Cayman was supported for enhancements to the dive and snorkel tourism market.

Review of various studies, reports and correspondence with other artificial reefing teams of prior reefing projects, the artificial reefing process has been documented to increase tourism to the area and stimulate the local economy. Some of these studies also showed positive environmental benefits to marine life colonization and/or fisheries. These studies are available from many countries worldwide. A list of specific reference ships that we have reviewed are:

Yukon, San Diego, CA, USA
Swan, Quebec, Canada
Spiegel Grove, FL, USA
USS Monitor, NC, USA
Barracuda Reef, NC, USA
HMCS Saskatchewan, Nanaimo, Canada
HMCS Mackenzie, Sidney, Canada
G. B Church, Wet Coast, Canada
HMCS Restigouche, Acapulco, Mexico
Over 100 ships since 1969, SC, USA
HMCS Chaudiere, Sechart Inlet, BC
Pratte's Reef – CA, USA
Vandenberg, Key West, FL, USA (Proposed plan)
HMCS Gatineau, Kingston, Canada

Extract from our Business Plan: *In all studies that the project team has reviewed, the increase in any geographical region that has sunk ships has been phenomenal. A realistic increase in growth for most regions has been 20%; however, with Cayman and our already prevalent presence in the marketplace, this increase may result in somewhat less than a 20% improvement, but will have a substantial impact on the business of tourism to our islands.*

Additionally, through the Financial Management Plan [Appendix 12](#), we will be tracking the financial impact to our economy of visitors to the Kittiwake once it is sunk, through tracking the revenues, costs and number of visitors to the Kittiwake to provide the data for an evaluation of the economic benefit to the country overall.

- Demonstration of public support for the proposed ship reef

The Cayman Islands has been actively working on this project for the past 5+ years. It was the brainchild of the CITA and has been supported through years of working groups by the CIDOE and both conceptually and financially by the Ministry of Tourism, Environment, Investment and Commerce, CIDOT, private sector and media as well as by the CITA.

In addition, all other effected Government agencies have been consulted, derived input from, and have supported the project given that we meet all stated objectives.

The tourism industry, as in most of the Caribbean, has been in a downturn due to the effects of many international occurrences and hurricanes over the past several years. We have Cayman nation-wide acceptance of this project as a new product development initiative that will create good press coverage, good and new dive/snorkel offerings, and provide a positive environmental impact on our natural resources to spread out visitors over a variety of sites.

The project was kicked off in 2000 as a concept, and presented to a meeting of 30+ Government and private sector businesses, representing a large diversity of sectors. During this meeting, and subsequent to it, many issues and concerns were addressed, and the project was given the green light to go ahead.

We as joint private-public sector partners have been actively working towards making this a reality since then. The cooperative agreement to support the maintenance of the Kittiwake from the private sector has also been a factor in moving this project forward. We have many cruise ship arrivals on a daily basis into the Cayman Islands (Grand Cayman) at this time. The number of passengers that come onto shore in a normal week can stress our natural resources, and this also causes support for the project to entice visitors to another site that is artificial.

At present, the Cayman Islands have invested substantial time and financial resources into this project. Prior to the Kittiwake initiative, several other ships were also sought that did not come to fruition and additional expenses were incurred on those activities also. Hopefully this will help to show MARAD our sincere desire to move this project forward and see it come to successful completion.

“This ship [Kittiwake] fits Cayman’s positioning as a dive destination. Our sea-faring heritage, our strong interest in presenting varied tourism offerings and our belief in preserving the environment, all played a major role in the decision to acquire this latest diving attraction.” Hon Minister Charles Clifford, September 19, 2008

- Connection with or enhancement of Naval or Maritime heritage



The Kittiwake, through our research to-date, has no direct ties to the Cayman Islands. However, the Kittiwake did do service in the Caribbean on several tours.

The Cayman Islands has a long history of being a sea faring nation. The countries motto is: *"He hath founded it upon the Seas"*. Cayman is a strong seafaring nation. Many of our citizens served in the British and the US Navy or on Merchant Ships. We are certainly a country that has strong ties to the sea.

Approximately 80% of our visitors are from the US, meaning that many visitors from the US will have the opportunity to see one of their fleet that served the country while in active duty. The preservation or extension of the life of the Kittiwake as an artificial reef that can be visited by divers and snorklers supports the preservation of maritime history, versus being broken up by the scrap metal industry. This project can serve both of our countries well, fostering a close relationship that is already enjoyed in many areas.

Additionally, the Cayman Islands is the home of the International Scuba Diving Hall of Fame which is dedicated to the pioneers of diving, celebrating their contributions in the fields of dive travel, entertainment, art, equipment design & development, education, exploration and adventure. <http://www.scubahalloffame.com/main.html>